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ECONOMIC DEVELOPMENT

SNAPSHOTS OF WORLD-MOVEMENTS IN COMMERCE, ECONOMIC
LEGISLATION, INDUSTRIALISM AND TECHNICAL EDUCATION

By

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etc.

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TO
MAHADEO GOVIND RANADE
AND
ROMESH CHUNDER DUTT
PIONEERS OF ECONOMIC STUDIES
IN MODERN INDIA
These Snapshots of Contemporary
Movements in World-Economics
Are Dedicated.

PUBLISHERS' NOTE

Economics is the foundation of Politics, and it cannot be denied that the former has been ignored too long in our country to its great injury. This handbook of *Applied Economics* is, we believe, the first of its kind in our country, and, in view of the changing economic conditions throughout the world, of the utmost practical importance to us. The observations are all based on first-hand knowledge, derived from visits to workshops and institutions, as well as conversations on the spot. Post-war Europe is in the melting pot and fraught with lessons of vital significance to fast-changing India.

And India comes in for her share of discriminating discussion. "The object in these sections," tells the author in his Foreword to the book, "is to furnish an objective basis of interpretation and attempt an estimate of India's present place in the scale of materialism." The chapter that closes the work contains a scheme for her material development which, in its definite suggestiveness, opens a wide field of vital work to do if India were to take her place among the competing nations of the world--work which demands immediate attention and has been comparatively ignored owing to the glamour of politics.

The Bibliography at the beginning and the exhaustive Index at the end will, it is hoped, be of great utility.

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PREFACE

I

THESE investigations comprising, as they do, different phases of applied economics have arisen in the course of my travels since the winter of 1920 in France, Germany, (Rhineland, Prussia, Saxony, Thuringia and Bavaria), Austria, Switzerland and Northern Italy. It has been sought to take snapshots of contemporary world-movements in commerce, economic legislation, industrialism and technical education in their geographical and historical perspectives.

The sources of information are mainly twofold. First, my personal obligations are numerous and varied. The directors of factories, proprietors and managers of banks, agents and secretaries of insurance societies, owners of landed estates, farmers, heads of export-import offices, rectors of commercial, technical and agricultural schools or colleges, revenue officers, members of different ministries, statisticians, professors of economics, labour leaders, welfare economists, engineers and chemists employed in industrial research, as well as commerce and manufacture journalists are responsible for many of the facts and interpretations bearing on economic dynamics such as have found a place in this volume. The papers are backed by a mass of concrete experience derived from visits to workshops and institutions as well as conversations on the spot.

Secondly, the data in print have been sought from the dailies of the different countries visited. The intellectual environment owes its character to the *Journee Industrielle* and *Matin* of Paris, the *Deutsche Allgemeine Zeitung* and *Berliner Tageblatt* of Berlin, the *Neue Freie Presse* of Vienna, the *Neue Zürcher Zeitung* and *Journal de Geneve* of Switzerland, and the *Corriere della Sera* of Milan. The weekly *Berichte aus den Neuen Staaten*, later known as *Wirtschaftliche Nachrichten* (Vienna), has also belonged to the regular scheme of studies.

The British standpoint has been followed in the *European Commercial* (a weekly Vienna), *Export World* (a monthly, London), the *Italian Mail* (a weekly, Florence) and the financial section of the *London Nation*.

Select numbers of *La Formation professionnelle* (a fortnightly, Paris), *Revue d' Economie Politique* (a bi-monthly, Paris), the *Weltwirtschaftliches Archiv* (a quarterly, Kiel), *Schmollers Jahrbuch* (a quarterly, Munich), *Annuaire International de l'Institut International d'Agriculture* (Rome), and *Giornale degli economisti e rivista statistica* (a monthly, Rome) have furnished important hints in the matter of orientation to world-economics.

The monthly *Bulletin* of the *Societe d' Economie Politique* of Paris, of which I am a member, has likewise been an aid in regard to contact with the developments in thought and practice.

For Russia (Eastern Europe generally), the Balkan complex and Turkey, the most important sources are German and Austrian and to a certain extent Swiss. In Italian the information is mostly confined to Italy.

Professor Riccardo Bachi's *L' Italia Economica nel 1921* (Citta di Castello, 1922) describes, item by item, the economic situation in Italy in 1921 with an appendix on the developments in 1922. The sections dealing with *politica economica*, i.e., economic politics, the politics of economics, or roughly speaking, economic legislation, furnish valuable data in regard to the public movements and activities influencing economic life.

The years 1921 and 1922 were for Italy, as for other countries, the years of great crisis. As a record of post-war economic depression Bachi's year-book exhibits an important phase in contemporary evolution. Besides, the social background of the Fascist *coup d'etat* automatically appears before the eyes.

The Indian data, which have been occasionally put in for purposes of comparison, are gleaned from *Industry and Commercial India*, two monthlies of Calcutta, the *Indian Year-Book*

(Bombay), *Calcutta Commercial Gazette* (a weekly), the government's annual statement exhibiting the "moral and material progress and condition of India," the Bengali monthly *Prabasi* (Calcutta), and the Hindi *Aj* (a daily, Benares) and *Abhyudaya* (a weekly, Allahabad). The chief object in these sections is to furnish an objective basis of interpretation and attempt an estimate of India's present place in the scale of materialism.

II

Evidently, the material is more than can be managed within the compass of a single volume. The problem has consisted in cutting down and abridging the stuff as much as possible. And yet no attempt has been made to cover the entire field of economic development in a comprehensive manner, whether region by region or topic by topic. The subjects have been taken in according as they came. The different chapters would thus appear to be certain economic pages from the diary of an Indian traveller in post-war Europe, engaged, as he was, in watching the "moments" or phases of evolution in agriculture, manufacture, and commerce.

Each of these snapshots is complete in itself in regard to the data, method of treatment, and theory, should there happen to be any. No cross-references are required. And since each carries its own dates wherever necessary it is easy at every point to disentangle the universal and the abstract from the ephemeral and the concrete.

There is but one postulate running through the whole collection. It may be worded thus: Whatever has happened in the economic sphere in Eur-America during the last half-century is bound also to happen more or less on similar and even identical lines in Asia and of course in India during the next generation or so. This indeed is the message to which the sociological studies in my previous works, for example, *The Futurism of Young Asia* (Leipzig, 1922), have inevitably led.

The news of to-day is the history of to-morrow. The news-essays, as many of these papers are, although covering very short periods, may therefore be taken to be contributions to post-war economic history within definite limits. Some of the details, disconnected as they will appear to be, are likely to possess significance as tit-bits of commercial geography.

The political background of these economic data has been set forth in my *Politics of Boundaries and Tendencies in International Relations* which is really a companion and complement to the present work. It is being published at Calcutta (Messrs. N. M. Ray Chowdhury & Co.)

III

There was a time when economic history or historical economics used to be appraised as a possible source of epoch-making consequences on economic science. It must be observed to-day that notwithstanding the daily increasing output of historical economics the "science" of economics has found hardly any reason to get modified in its most fundamental aspects. In the realm of pure theory, so far as a real law or significant generalization is concerned, the science of economic "values" is virtually independent of historical studies. The hopes of economic history have thus been frustrated as a reorganizing force in economic science. The science is continuing to advance almost exclusively on "classical" lines.

But all the same, historical economics has succeeded in justifying itself, not only as a branch of culture-history, but as a handmaid to applied economics or the art of economic development as well, and to this extent as an undoubted auxiliary to the science of economics. The impact of these historical investigations on "pure economics" is, moreover, quite considerable and must not be overlooked.

Biographical accounts of industrial pioneers, statistical reports of business concerns, stories of the growth and development of individual factories, banks and trading houses,

summaries of experiments with fatigue, hours of labour, profit-sharing, shop-council, municipal ownership, nationalisation, birth-control and other conditions affecting the life and efficiency of workmen and the quality of the population in general, descriptions of co-operative transactions in agriculture, credit or housing, investigations in psychotechnics and industrial hygiene, and such other literary productions have been growing in quantity and variety. The pure theorist is not impervious to all these realistic data, but on the contrary has been seeking more and more to exploit them adequately in order to humanize, socialize and spiritualize his study of the "economic man." The sociologist Franz Oppenheimer's *Theorie der reinen und politischen Oekonomie* i.e., Theory of Pure and Political Economy, (Jena, fifth edition 1924), is one of the latest embodiments of these new tendencies in economic science.

Economics as such has not indeed been transformed by these historical humane studies. But there seems to be hardly any doubt that the psychological attitude of the "scientist" in regard to economic phenomena has been profoundly modified. The change can be characterized in one word as the conquest of economic science by what for the want of a better term may roughly be described as "socialism."

The socialistic trend of economic thought is patent in France, Germany and Italy—even in circles that hold no brief for socialism.

IV

A most typical instance of this expansion of socialism is to be found in Professor A. C. Pigou's *Economics of Welfare* (London, first edition 1920, second edition, 1924). The author nowhere mentions the names of Karl Marx and Lenin. Even the words, Soviet Russia, Bolshevism, communism, nay, socialism have been carefully avoided. And yet from cover to cover the treatise is one long, strenuous and comprehensive attempt to discover (cf. the problem in Part I chs. VI and VII), as much and as often as possible, the "science" i.e., the

strictly logical arguments, *in favour of*, if not the maximum, at any rate, a great deal of what the "poor" or the labour point of view in economics has been demanding during the last two generations.

The author has legion of *buts* and *ifs* in his thesis. Nor is his exposition anything but tentative and controversial in many particulars, as nearly every treatment of economic issues is bound to be from the nature of the case. But his work has already demonstrated how British economics is not to halt at John Stuart Mill nor at Alfred Marshall, but is out establishing *repprochement* with the "new order" of futuristic theories,—although no doubt still on the capitalistic basis.

"Strikes", said this Cambridge scholar several years ago in his *Economic Science in Relation to Practice*, "by engendering respect for the workmen's strength, may have an indirect and general effect upon the level of wages as well as a direct and particular one." This is how orthodox economics vindicates the claims of labour against those who would argue against the utility of strikes.

According to the Italian economist Pareto, as stated in his *Cours d'Economie politique* (Lectures on Political Economy, in French), it is impossible for the dividend as a whole and the real income of the poor to move otherwise than in the same direction. The manner in which Pigou criticises this "law" of Pareto's, eminently optimistic as this latter is, furnishes really the keynote to his own standpoint in economic science.

We read in *Economics of Welfare* (Part IV, ch. II), as follows: "The statistics set out (by Pareto) are not adequate to support this conclusion. Nor are its logical foundations sound. The possible openings for disharmony must, therefore, be studied in all its detail."

These "disharmonies" the author proceeds to investigate not, however, from the platform of an "indifferentist" equipped with his "iron law," but with an eye to "welfare". The efforts to bridge the gulf and found half-way houses

between the iniquities of the *status quo* and the social justice of to-morrow constitute indeed the most signal phases of economic theory in its recent developments.

That problem lies outside the range of the present publication. Enough to notice, incidentally, the latest currents in the thinking of economists.

Perhaps no statement is more representative of the attitude of economic science at the present moment than the following. "It is not wonder but rather the social enthusiasm" to cite the contemporary English economist again, "which revolts from the sordidness of mean streets and the joylessness of withered lives, that is the beginning of economic science,". One has here only to remember the intellectual atmosphere under which it was possible to condemn economics as a heartless "dismal science" to understand along what revolutionary paths the new generation of economists is ready to venture.

Welfare is no longer being treated as a non-economic or extra-economic phenomenon, as an item of philanthropy or social service such as belongs to the domain of religion or ethics, but has succeeded in winning its place among the legitimate topics of orthodox economics. Thus considered, economic science must be regarded as having been to a certain extent tremendously enriched. And this enrichment it owes, among other influences, to that of economic history.

V

A part of the writings was published in *Commercial News* (Berlin), "an organ of India's opportunities in foreign trade," which it was my charge to edit. Some of the other essays have appeared in one form or another in the *Modern Review* (Calcutta), *Mysore Economic Journal*, *Forum* (Calcutta) *Hindustan Review* (Calcutta), *To-morrow* (Ahmedabad) *Calcutta Review*, *Bombay Chronicle*, *Welfare* (Calcutta), as well as *Export and Import Review* (Berlin) and the *Zeitung des Vereins deutscher Ingenieure* (Berlin). About twenty five per cent came out in the daily *Forward* (Calcutta).

Thanks are due to Mr. Birendra Nath Das Gupta, electrical engineer, director of the Indo-Europe Trading Co., (Berlin), for the facilities placed by him and his office in regard to the publication of *Commercial News*.

I owe likewise much to Professor Baneswar Dass, chemical engineer, for his valuable help in diverse ways.

Bozen (Bolzano), Italy. }
14 April, 1925. } **BENOY KUMAR SARKAR**

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ECONOMIC DEVELOPMENT

CHAPTER I

EDUCATION IN FRANCE FOR ECONOMIC DEVELOPMENT

ENGINEERING "OFFICERS" AND "MEN" IN THE INDUSTRIAL ARMY

"EVERY year about 2000 engineers are turned out of the technical institutions in France", said H. Curiot in 1916 writing for *La Formation professionnelle*. Of this number about 20 per cent are turned out of the *Grandes Ecoles*, the type to which the *Conservatoire* of Paris belongs. The *Ecoles des arts et metiers* are responsible for about 600. Nearly a fourth of the total number obtain their diplomas from more or less specialized institutions. And the rest, about 400, are students of the *Facultes des sciences i.e.*, the science-faculties of the Universities.

These engineers are generally 25 years old. The training they receive enables them to think of becoming *des chefs d'industrie* or captains of industry.

Curiot believes that another 400 men should be counted upon as being every year added to the list of such high-class engineers in the shape of contribution from practical experience in workshops and factories. These are the self-made engineers, so to say. Altogether, in Curiot's calculation there are about 80,000 engineers employed in French industry¹ between the ages of 25 and 60.

¹ See the *Rapport general sur l'industrie francaise*, 1919 (ministere du commerce et de l'industrie, Paris for the industrial background of the conditions in technical education.

The number of working men in the factories is taken to be 5 millions. On this basis every engineer has at his command on an average about 60 men. The proportion between the "officer" and the "men" in the industrial army of France is considered to be quite adequate.

HIGHER TECHNICAL EDUCATION IN THE UNIVERSITIES

The examples of Germany, Austria-Hungary, Belgium and Switzerland have inspired the science-faculties of the French Universities to create specialized technical courses such as are adapted to the requirements of *industries regionales* (regional or local industries). The establishment of electrotechnical institutes or sections for industrial electricity by the nine *Faculties* at Aix, Besancon, Clermont Ferrand, Lille, Lyon, Montpellier, Nancy, Poitiers and Toulouse is due to this impulse. The Universities of Paris, Lyon, Clermont Ferrand, Lille, Montpellier, Marseilles, Nancy, Rennes and Toulouse have likewise founded *Institutes chimiques* or schools of chemistry.

Schools of oenology are to be found in connection with the universities at Bordeaux and Dijon. The University at Rennes maintains an entomological and agricultural section, those at Clermont and Montpellier stations on viticulture (grapes and wine), while the one at Nancy schools of brewery, dairy-farming and geology.

Aero-technical institutes exist as divisions of the universities of Paris and Nancy. The university of Lyon possesses a school of tannery. Agricultural chemistry is taught in the university at Poitiers, watch-making at Besancon, and paper-making at Grenoble.

GRENOBLE, NANCY AND TOULOUSE

But altogether, these technical divisions of the universities do not attract a sufficiently large number of scholars.

In Curiot's calculation not more than 400, i.e., one-fifth of the total number of engineers turned out of the higher institutions of technical learning come from the *Facultes*. In *Livret de l'Enseignement technique* (Paris, 1913), by Gaucher and Mortier the number of students who obtained university diplomas in 1911 was only 375. It is interesting to observe that of this number 306 diplomas were delivered by three universities alone (Grenoble, 129, Nancy, 94, and Toulouse, 83), while all the others put together accounted for only 69.

In other words, with the exception of Grenoble, Nancy and Toulouse technical education in France is primarily a function of extra-university educational institutions. The position remains the same although since 1919 Strassbourg with its university, strong as it is in chemical engineering, has been annexed to *la civilisation française*.

SIX ENGINEERING COLLEGES

There are 6 "national" schools of engineering in France known as the schools of "arts and metiers". One is at Paris and the others are situated in five different regions,—at Aix (Province) Angers-on-the-Loire, Chalons-on-the-Marne, Lille (on the Belgium frontier) and Cluny. The institutions are oriented to the training of directing heads for factories, engineers and industrialists connected with mechanical workshops.

The students are admitted on the results of a competitive examination. They must be younger than 19 but older than 16 and in addition to one or other academic certificate indicating secondary school-final or the like must possess a testimonial in regard to practical industrial work. Foreigners seeking admission have to apply to the *Sous-Secrétaire d'Etat de l'Enseignement technique* (Under-secretary of state for technical education) through

their diplomatic representative and have to submit to an entrance test.

TRAINING FOR MECHANICAL ENGINEERS

The course is finished in three years. The following subjects are covered : algebra, trigonometry, complements of geometry, differential and integral calculus, descriptive geometry, cinematics, mechanics, physics, aerodynamics, thermodynamics, electricity, industrial drawing, technology and machine-construction. Outside of these mathematical and engineering branches the students have to go through French language, history, geography, accounting, industrial legislation, social economics, labour organization and industrial hygiene. A foreign language is compulsory. Practical work is done in four divisions: fitting, carpentry and modelling, foundry, smithy and boiler practice.

FREE PROFESSIONAL SCHOOLS

There are 5 " national " schools called "professional" in different districts of France. These are intended to train expert working men such as may grow ultimately into heads of workshops and factories. Students who pass out of these institutions may also get admission in the *ecoles d' arts et metiers*. Indeed academically speaking, in reference to the colleges of engineering the *ecoles professionnelles* should be regarded as but preparatory institutions or lower grade institutions of the same category. The students are between the ages of 12 and 15. No fees are charged for tuition.

LOWER SCHOOLS OF ENGINEERING

The normal course is covered in four years, but those who intend to enter the higher schools are allowed to sit for a special examination at the end of three years. Courses are offered in morals and civics, writing, French, history, geography, hygiene, arithmetic, algebra, geometry

and trigonometry. Among the engineering subjects accounting, general and industrial physics, general and industrial chemistry, mechanics, technology, ornamental designing, as well as geometrical and industrial drawing are schèduled. Then there are the foreign languages of which one is compulsory. Wood work and smithy constitute workshop practice in every institution, while in certain schools on account of local reasons the students get a chance to do practical work in ceramics, textiles, electrical machinery etc.

FREE SCHOOLS OF COMMERCE AND INDUSTRY

Certain schools evidently of an elementary character are known as *écoles pratiques* (practical schools) *de Commerce*) et d' *industrie* and are intended both for boys and girls. These are more numerous than the *écoles professionnelles* but belong almost to the same academic grades. The object is to train qualified apprentices. The students may enter at the age of 12 and are to finish the courses in 3 years.

The first two years are specially given over to primary school subjects, such as French, morals, history, arithmetic, algebra and geometry. The professional subjects are introduced gradually and demand the exclusive attention in the third or final year.

TRAINING OF WORKING MEN

The technical branches of instruction comprise mechanics, designing, descriptive geometry and electricity for the industrial section. For the commercial section the technical subjects include geography, accounting and the study of goods. The subjects are arranged according to the needs of the local industry and commerce ¹.

¹ The social economics of two industrial cities, Lille and Nancy, form the subject matter of Blanchard's essay, "*Deux grandes villes françaises*," published in *La Géographie* (Paris 1914.)

Owing to local needs the *ecole pratique* at Morez possesses a section for watches and clocks. The same circumstances account for the electrical section in the school at Lille. Printing and typography also may be studied at Lille. At Elbeuf weaving is a special subject. Hotel business is taught at Thonon. The school at Vierzon specializes in ceramics.

WOMEN'S SCHOOL

In 1918 there were 82 *ecoles pratiques* of which 17 were women's institutions. In regard to these latter M Caillard¹ says: "Whatever be the professions taught in the women's school domestic science and hygiene are treated as compulsory subjects for every student." The professions for which the *jeunes filles* (young women) are educated in these industrial schools comprise tailoring dress-making, linen-drapery, lace-making, artificial flower-making, and so forth.

TOURCOING AND THE OTHER NORTHERN CENTRES

In 1918 there were 10 *ecoles pratiques* in the northern region (division). As typical of these may be mentioned the institution at Tourcoing.

The scholars belong to two classes: (1) permanent and internal and (2) external. The latter class is made up of working-men who come from the factories of the neighbourhood during certain hours of the day.

The external students fall into various groups according to the works in which they are employed. There are (1) wood-workers, (2) metal-workers, (3) electricians, (4) textile-hands, (5) building tradesmen, (6) moulders, (7) shoe-makers and (8) tailors. Special classes in (1) accounting, (2) stenography, (3) foreign languages, (4) technology, (5) drawing and other subjects are held in order to meet the requirements of these externals.

¹ *La Formation Professionnelle* Paris, 1918 No. 18.

All the *ecoles pratiques* are provided with equipment for mechanical engineering and timber work. In Lille there is a section for lithography, in Boulogne for marine engineering and in Denain for boiler work.

In the northern districts there were three centres for women, at Tourcoing, Roubaix and Boulogne.

REIMS IN THE EAST

In the eastern region Reims possesses the most typical *ecole pratique*. In 1918 there were 540 permanent internal students.

The school has five divisions : (1) electricity, (2) textile, (3) industrial chemistry, (4) iron and wood work, (5) commerce. The last two divisions may indeed be regarded as the common features of most of the *ecoles pratiques*.

In the textile and industrial chemistry sections the students learn enough to be able, in course of time, to become subordinate heads of the industries. Like Tourcoing, Reims also is visited by "external" students.

There were altogether 8 schools in the eastern districts.

For women there are separate schools in Reims and Dijon.

HAVRE AND ROUEN

In the western region Havre¹ is an important centre. The *ecole pratique* here is provided with five divisions : (1) "fitting", (2) boiler-work, (3) cabinet-making, (4) marine engineering, (5) colonial economics.

Another important centre is Rouen. There are ten sections (1) "fitting", (2) metal-work, (3) locksmith's trade, (4) industrial electricity, (5) smithy, (6) carpentry

¹ See Wenlensee's *Le Port du Havre* (Paris 1921) for an economic study of this sea-port.

(7) wood-work, (8) mechanical modelling, (9) carding (wool-combing) machines, (10) steam, gas and oil-engines.

There were such schools in ten centres in the *region de L'ouest* in 1918. In six of these there are women's schools.

A school for hotel-industry is to be found at Havre.

BORDEAUX

In the south-eastern region Bordeaux is the most famous centre. The school here is provided with (1) fitting, (2) wood and iron work, (3) smithy, (4) boiler practice, (5) carpentry, (6) cabinet-making, (7) commerce.

There were altogether 9 schools in the districts ¹.

The women's school is located at Bordeaux.

SAINT-ETIENNE

The central region, and especially the Loire department (district) is one of the most developed sections of France. There are 11 institutions in this region.

The most famous of these and one of the most advanced in France is the one at Saint-Etienne. In 1918 there were 530 students. The school has the following sections: (1) foundry, (2) fitting, (3) gunsmith's work, (4) industrial electricity, (5) carpentry, (6) modelling, (7) cabinet-making, (8) sculpture in wood.

M. Lebois, as head of this school is one of the first in France to have started the idea of opening special classes for the external students coming from the factories of the neighbourhood. For the last thirty years the school has been the centre of education to hundreds of working-men of the locality.

The schools in the *region du Centre* are oriented to the local needs. Thus at Roanne there are divisions for

¹ Lorins' *Le Port Bordeaux* (Paris 1921).

the woollen goods, spinning, weaving, bleaching and dyeing. Lace-making is taught at Saint Chamond and Le Puy, cutlery at Thiers and hotel industry at Vichy.

There are two centres for women, one being at Saint Etienne.

GRENOBLE AND THE ALPINE REGION

The Jura-and-Alps region possesses certain characteristic schools. The most important and world-renowned of these is the *ecole pratique* at Grenoble, known as the *ecole Vaucanson*. In 1918 it had 620 students.

The industrial section, in addition to the general courses, is provided with (1) a division for industrial electricity and (2) division for industrial chemistry. The students who pass out of these divisions are qualified to render expert service to the numerous electrical and chemical industries of the French Alps.

In the commercial section the most remarkable feature is the division of gloves-making, which constitutes not only a school but a complete factory as well, provided, as it is, with its buying and selling departments. The students are the principal employees in this manufacturing establishment and are paid the usual wages. They learn everything connected with gloves down to their exportation. At the end of the studies certain scholars are furnished with the expenses of travelling in English, German or Spanish-speaking countries.

There were altogether 7 schools in this region. At Morez the school specializes in the manufacture of spectacles and clocks, at Oyonnux in that of combs and celluloid articles, at Romans in that of shoes, and at Vienne in that of drapery.

There is a first class hotel-school at Grenoble.

For women there was only one school in this region in 1918.

MARSEILLES

In the southern region Marseilles commands the greatest attention. The school here has seven divisions : (1) industrial electricity, (2) smithy, (3) locksmith's work, (4) boiler work, (5) zinc-plating, tinman's trade and leadwork, (6) foundry, (7) carpentry and modeling.

In 1918 there were altogether 7 schools in the south. Marseilles had 550 students.

Lithography is taught at Nimes. There are hotel-schools in three centres.

There are women's schools at Marseilles and Nice.

REGIONALISME IN EDUCATION

From the foregoing account one obtains not only a bird's eye view of the training of French "apprentices" but a picture of the industrial (and economic) geography of France as well such as is described in *La France d'aujourd'hui* (Paris, 1924) ¹ The *ecoles pratiques* are indeed embodiments of *regionalisme* in lower professional education.

CHAPTER II

AGRICULTURAL AND VETERINARY SCHOOLS
IN FRANCE

THREE COLLEGES OF AGRICULTURE

THE "national schools" of agriculture are three in number. One is located at Grignon (Seine et Oise district). The second is located at Montpellier (Herault) and the third at Rennes (Ille et Vilaine). These belong

¹ In this volume prepared as it is under the joint authorship of Busson, Fevre and Hauser one gets an objective account of the "eleven regions" of France from the standpoint of economic geography. Brunhes' *Geographie Humaine de la France* (Paris, 1920) serves also to furnish an idea of "regionalism," the subject to which Professor Hauser has devoted a special book.

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to the highest grade of institutions in the agricultural line and should be described as colleges in the Indian sense.

The object of these schools is to train young men for agriculture in rural districts ¹ whether for their own sake or as employees for others. The instruction is scientific and comprehensive enough to enable the scholars to function as teachers also in agricultural schools. The government does not guarantee any posts to the students who obtain diplomas from these institutions.

WHAT IS AGRICULTURAL EDUCATION ?

The courses of instruction comprise zoology, botany, mineralogy, agricultural geology, physics and meteorology, general and agricultural chemistry, as well as biological chemistry as applied to agriculture. These are the scientific subjects of more or less liberal educational character. The specially technical subjects include agriculture, horticulture (gardens), arboriculture (trees), viticulture (grapes and wine), silviculture (forests), zoological technics, entomology, sericulture (silk), apiculture (bees and honey), pisciculture (fish) and technology. In addition there are the civic, economic and social subjects such as rural economy, rural legislation, agricultural accounting and hygiene.

The lessons are of course both theoretical and applied. Practical work is done in the laboratories and the "grounds" of the school. Excursions to the farms and agricultural factories are also undertaken. The students thus obtain a chance to participate in the actual

¹ In Demangeon's *L'Habitation rurale en France* published in the *Annales de géographie* (Paris 1920) one gets a picture of "village" conditions in France. De Rocquigny's *Les Syndicats agricoles et leur oeuvre* (Paris 1900) and De Saint-Genis' *La Propriété rurale en France* (Paris 1902) furnish the proper economic orientation to the subject of French education in agriculture. Arguments against excessive industrialization to the detriment of agriculture are to be found in Terrel's *Le Problème de la terre dans l'économie nationale* (Lyon, 1925).

exploitation of raw produce as well as get initiated into the details of supervision and management of work on the farms.

Although the programme of the three schools is identical the emphasis in each is oriented to the local conditions. Thus the school at Montpellier specializes in the study of wine, oil-seeds and silk.

REGULAR AND CASUAL SCHOLARS

The "regular" students are selected according to qualifications tested by competitive examination. Foreigners are admitted to this entrance test. The candidate must be at least 17 years old. For certain subjects "credit" is given on the basis of certificates even to foreigners.

In order to get admitted without examination foreigners have to apply to the ministry of agriculture, and as is usual in France, their application has to be endorsed by the diplomatic representative of their lands.

Then there are the "casual" students (*auditeurs libres*).

These may be admitted at any stage of the school and during any season with the permission of the ministry of agriculture. Foreigners likewise enjoy the same privilege.

TERMS AND EXPENSES

At Grignon and Montpellier the course of instruction covers 2½ years. At Rennes the course runs for 2 years only. Foreigners can study only as *externes* i.e. are not allowed to live and board in the premises maintained by the institutions. At Rennes, however, there is no *pensionat* i.e. room and board system even for French "regulars." For tuition the foreign "regulars" are charged 400 francs (Rs. 75) per year. The foreign "casuals" have to

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pay at half this rate. An extra sum of 25 francs (about Rs. 5) per month is charged of this latter class of students should they care to do practical work.

AGRICULTURAL ENGINEERS

Regular students, no matter of what nationality, get the diploma of "agricultural engineers" at the end of the terms after public examination. No degree is offered. Casual students do not get any official certificate. But those foreigners who get admission without examination and prosecute their studies as *regulars* obtain a simple certificate provided they finish the course and pass the final examination.

From the stand point of age, be it noted, the "agricultural engineers" who just pass out of the colleges in France, are, roughly speaking, equivalent to the B. Sc's of India.

OTHER AGRICULTURAL INSTITUTIONS

These institutions are not, however, all. In addition to the three colleges there are 26 agricultural *ecoles*, not described as "national", distributed in different parts of the country.

There are seven other institutions which may be called more or less specialized schools. Thus the one at Antibes (Alpes Maritimes district) is a horticultural school. Another school is called horticultural as well as agricultural. It is located at Hyeres (Var). The agricultural school at Neuvis (Correze) is called also "rural industry school." Similarly at Aurillac, (*Cantel*) dairy, and at Beaume (*Cote d'or*) wine, constitutes the special feature of the *ecole*. Finally there are two farming-schools (*fermes ecoles*).

In 21 of these 33 institution's the tuition comprises 2 years. Four carry a 2½ year course while in the others curriculum is spread over 3 years. At Aurillac, for

instance, the third year is given over specially to *laiterie* (dairy).

In these schools the scholars are admitted between the ages of 14 and 18. The farming-schools do not admit anybody under 16.

WINTER-SCHOOLS OF AGRICULTURE

Further, there is a number of seasonal schools with which the country is dotted over. For the winter months there are two types of institutions, one *fixe* (permanent), and the other *ambulante* (i.e., peripatetic). There are 35 institutions of the "fixed" category and 30 belong to the other class.

HOUSE-KEEPING SCHOOLS

Certain schools of agriculture are devoted to house-keeping or domestic science. These are to be counted as distinct from the institutions already mentioned.

These *ecoles agricoles menageres* are of two classes, *fixe* and *ambulante*. The permanent schools are 2 in number, and the peripatetic or travelling 46.

WOMEN'S AGRICULTURAL SCHOOL

There is an *ecole nationale* of agriculture for women at Coet-logon-Rennes in the district of Ille-et-Vilaine. It does not admit scholars under 16 and admits only those who pass a competitive entrance examination. No student can get admission as "casual" scholar.

The course is finished in one year. Instruction is both theoretical and practical. The following subjects are covered : agriculture, zoological technique, horticulture, botany, technology, agricultural chemistry, hygiene, rural economy, domestic science, cooking and confectionery, aviculture and dairy.

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TRAINING OF WOMEN TEACHERS FOR AGRICULTURAL SCHOOLS

The Coetlogon-Rennes school for women has a special department for the training of teachers. It is called the *section normale superieure*. The women who enter this "higher normal section" are qualified to take posts as school mistresses in all agricultural (including house-keeping) institutions. They have to spend only one year for study,—of which half is devoted to the fixed or travelling house-keeping schools.

Only those women who have passed the examination of the *ecole nationale* at Coetlogon-Rennes take part in the competition for admission in the *section normale*.

All the students in this section are maintained by the government with stipend. In other words, the women teachers of agricultural schools in France are educated at state expense.

THREE VETERINARY COLLEGES

There are 3 veterinary schools in France. One is located at Alfort (Seine) in the north, one at Lyon in the centre and the third at Toulouse in the south. Each carries a four-year course. All the institutions are "national" *i.e.* financed and administered by the state.

FOUR-YEAR COURSE

The first year's programme of studies comprises medical physics, medical and pharmaceutical chemistry, pharmacy and toxicology, medical botany, fodder-botany, descriptive, systematic and topographic anatomy of domestic mammals (Part I), histology, embryology and physiology, and as a special subject the study of horses.

During the second year courses are given in the following subjects: medical zoology, pathology and clinic

of parasitical diseases descriptive, systematic and topographic anatomy of domestic mammals (Part II), physiology, general therapeutics, materia medica, hygiene and agronomy.

In the third year the course comprises pathological anatomy, technique of autopsy (post-mortem examination), medical jurisprudence, medical pathology (Part I), surgical pathology (Part I), surgical anatomy, pathology of cattle, sheep, goats, swine, birds etc. (Part I), special medicine of cattle etc. (Part I), obstetrics, and microbiological pathology.

The fourth and the last year of study is given over to food-stuffs and fodder, medical pathology (Part II), veterinary jurisprudence, surgical pathology (Part II), pathology of cattle etc. (Part II), special medicine of cattle etc. (Part II), microbes, sanitary and clinical police, zoological technique and rural economy.

CONDITIONS OF ADMISSION

The students are admitted on the results of a competitive examination, both written and oral. The candidates must be at least 17 years old and must possess the academic certificate of "agricultural engineer" or "bachelor" (*i.e.* secondary school-final). Candidates who possess the French diploma of "doctor of medicine" can get admission in the third year class. Foreigners are admissible at any stage according to qualifications but after passing the examination are not entitled to open practice in France.

CHAPTER III

FRENCH ADMINISTRATION OF TECHNICAL -EDUCATION

THE day to day developments of France in technical education may be watched in the fortnightly journal *La Formation professionnelle* published by the *Francaise pour le developpement de l'enseignement technique* (Paris). This association was founded in 1902 and has contributed much to the changes and reforms in the schools of vocational learning.

Under its auspices a congress is held once a year in different parts of the country. The deliberations of the congress provide expert but non-official assistance to the ministry of education, especially to the *Sous-Secretaire* or Under-secretary for technical education.

A book describing the actual conditions such as obtained in France before the war is *Liveret de l'Enseignement technique* (1913) by Gaucher and Mortier. The number of schools has increased since then and certain novel features have been introduced into the system. But the publication is valuable as a document of pedagogic history and can still be used as a guide for present-day conditions.

THE LAW OF 1919

Technical education has been re-organized in France since the war. The *loi Astier* (Astier Act) of July 1919 is the basis of the present educational administration in the agricultural, industrial and commercial lines.

The most important feature of the Astier Act consists in the establishment of compulsory but free courses or classes for the working men and women employed in the professions. As the finances ear-marked for these measures have proved to be insufficient, a new law is in

contemplation at the moment of writing (December 1924). The object is to raise a tax of $\frac{1}{2}$ franc per 100 francs spent by the proprietors every year on salaries and wages.

COMPULSORY AND FREE TECHNICAL COURSES

Provision has thus been made for every man or woman under the age of 18, no matter where or how employed, to follow certain courses of a technical character for the period of three years. The schooling embraces 100 to 200 hours per year at the rate of not more than 4 to 8 hours per week. The proprietors of factories or business concerns are bound under penalty to afford time and facilities to their employees in the prosecution of these studies.

The courses or schools may be instituted by the proprietors themselves in their own premises. The Government offers half the expenses if necessary. Otherwise every commune or group of communes is bound to create such institutions at its own cost. The committee of investigation and supervision in each instance consists of the mayor, representatives of the municipal council, representatives of the chamber of commerce, workingmen's delegates, inspector of primary schools and inspector of labour conditions.

FINANCING AND CONTROL

There is a number of "private" schools for industrial and commercial education. Some of these are also described as "recognised by the state". The official control over them is very strict.

For all practical purposes, however, one must note that technical education in France is essentially a government affair. The most important institutions are *écoles publiques*, i. e., public or state schools.

When the *main* expenses are borne by the *central* government the institutions are generally known as

"national". But when the *departements* or *communes*, i. e. districts, towns and villages singly or collectively take upon themselves the financial responsibility the schools are called *departementale* or *communale* as the case may be.

In certain cases the "national" institutions get some contributions from the district and town funds. The district and town schools are likewise helped by the central authority in regard to building, furniture, equipment etc. Some of the schools known as *ecoles de metiers* are run by chambers of commerce and may also get grant-in-aid from the central government like other "local" institutions. The words "central" and "local" are being used only to indicate the chief source of financing, without reference to economic or administrative "regionalisme".

In any case neither in the private or "recognized" schools nor in the government institutions can a foreigner get employment in any capacity. The only exceptional cases are furnished by the occasions when the state wants to introduce a new industry for which a specialist is not available in France or when a certain language is to be taught for which a "native" lecturer is considered to be desirable. France like every other country on the surface of the earth is 100 per cent *swadeshi*.

ECONOMIC DEVELOPMENT AND PROFESSIONAL EDUCATION

An advisory board, known as the *conseil de perfectionnement*, constituted mostly of prominent industrialists, bankers and merchants, is attached to every government institution in order to bring technical education in daily contact with the currents of active economic life. The actual administration lies, however, in the hands of state officials.

Co-operation from the side of private bodies and non-official experts is brought to bear on the technical schools in and through the "inspecteurs" or visitors who are nominated or elected on account of the part they play in agriculture, industry or commerce. Their functions although honorary are almost semi-official; and although not inspectors in the administrative sense they serve to supplement the work of the government inspectors of schools. The number of such visitors is 200. Professional education is in every way enabled to act and react upon economic development.

A FRENCH CRITIC ON THE TECHNICAL INSTITUTIONS OF FRANCE

The actual situation may be understood from the criticism of the French expert.

Writing on the Astier Act, M.A.L. Bittard ¹ says : "Our existing institutions of technical education are not enough in number. The *Conservatoire des Arts et Metiers* (of Paris, the highest college of technology in France), requires to be thoroughly transformed, because it does not meet the exigencies of modern industry. As for the lower schools of different denominations their number has in many instances to be doubled in order that they may satisfy the present requirements. And these should be opened just where the industry needs them, for just the kind of industry needed, and just in adaptation to the stage of development attained by the industry." It is to supply some of these needs that the loi Astier has been passed.

TWO CATEGORIES IN ADMINISTRATION

In France technical education comprises two different categories. The administration also is given over to two distinct bodies.

¹*La Formation Professionnelle* (Paris, 1919), No. 23.

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In the first place, industrial and commercial education constitutes one branch of technical education. It is managed by a special board known as the *sous secretariat* (which functions as an "under" i.e. sub-committee) of the ministry of public instruction. The budget is of course specially ear-marked for this board.

Secondly, education in the profession of agriculture constitutes a distinct branch of technical education. It does not, however, belong to the ministry of education but is administered by the ministry of agriculture. A separate budget has likewise to be framed for this aspect of public instruction and submitted to the finance-commission of the *Chambre des deputes (Parliament)*.

SEVEN TYPES OF SCHOOLS

The French technical schools may be grouped under seven general heads. First come the *ecoles nationales des arts et metiers* (national schools of arts and industries). In France the word "national" is used to indicate the character of the institution as a "state" enterprise.

Then come the *ecoles nationales professionnelles*.

Thirdly, there are the *ecoles pratiques de commerce et d'industrie*.

A fourth class consists of the *ecoles nationales d'agriculture*.

In the fifth place there are certain agricultural and horticultural schools lying outside of the above group.

There is a special *ecole nationale d'agriculture* for women. It is located at Coetlogon-Rennes.

The total number of agricultural schools and colleges of all sorts is 150. Finally, the *ecoles nationales veterinaires* or veterinary schools constitutes an independent type.

CHAPTER IV

THE ECONOMIC BACKGROUND OF TURKISH VICTORIES

A POLITICAL DILEMMA

FRANCE continues to be an uncompromising enemy of Soviet Russia. And yet for about a year and a half previous to the victories of the Nationalist Government of Angora under Kemal Pasha the world has witnessed the curious spectacle of a militant Turkey being befriended with equal enthusiasm by France and Soviet Russia. This dilemma of international politics should appear to be solved only if we look to the interests of the commerce and industries of the Turkish Empire.

TURKEY'S SOLVENCY AND STAYING-POWER

To begin with, one should be clearly oriented to the fact that the financiers of Europe and America are fully conscious of Turkey as a solvent economic factor. Notwithstanding the new wars which have raged for the last four years, Turkey has been able to pay her foreign shareholders millions of pounds which had fallen due during the world-war.

The American Chamber of Commerce also testifies to the vitality of Turkish economic life. Its monthly organ, *The Levant Trade Review*, reports that Turkey's exports, to the United States have long reached the pre-war level and that American imports are much higher than ever before.

Normally speaking then, Turkey's staying power as a fighting unit is unquestioned. And this explains why since the period of the Balkan Wars (1912) the Turkish army has for a whole decade never shown the least signs of depressions.

THE URGE BEHIND FRANCE

During the period of events in Asia Minor since the Treaty of Sevres, Turkey has, besides, had a "natural

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ally" in France. Several milliards of *gold* francs invested as they are in Turkish mines, railways and banks have kept French interest in the Near East quite alive and warm.

(a) *Mines*

The Heraclea coal mines on the Black Sea coast are almost exclusively worked by French capital. In all the Turkish mines, while Great Britain is responsible for six million francs, French interest is represented by seven times as much.

(b) *Railways*

France has constructed about 1250 miles of railway in Turkey. Less than 400 miles owe their origin to English capital and management.

(c) *Tobacco*

The cultivation of tobacco and the sale of the leaf are two monopolies in Turkey and both are enjoyed by one company. Fifty per cent. of the total capital of the company, which is estimated at a hundred million francs has been contributed by Frenchmen.

(d) *Banking*

The Imperial Ottoman Bank and the *Dette Publique Ottomane* are the two most essential organs of Turkey's financial life. In the former the preponderating element is French and in the latter 60 per cent. of the capital has come from France.

The urge behind friendship for Turkey against Greece in French public life lies in the maintenance of all this "Greater France" of industry and commerce in western Asia and south-eastern Europe.

THE "ETERNAL QUESTION" FOR RUSSIAN TRADE

Nor can Russia afford not to be an ally to the "rebel" forces of Angora engaged as they are in the war for the liberation of Constantinople and the Straits from the

control of the Entente. Russian commerce demands an absolutely free Turkey.

The Governments of Russia, whatever their political and social creeds may happen to be for the hour, have always to see to it that the "freedom of the seas" is maintained in order to allow her economic enterprise an unhampered life in its relations with Europe and Asia. The key to the emancipation of Russian agriculture, industry and commerce is to be sought to-day, as previously through the ages in the command over the "gates", the *Porte*. The problem of Turkey has been an "eternal question" in Russian economics.

SOVIETISM AND "NATIONAL" INDEPENDENCE

With the progress of world events Russia happens to have embarked upon a policy which, whatever be its other tenets, is pledged to the maintenance of economic and political independence among the semi-developed peoples of Asia. The policy is manifest in Soviet Russia's self-denying withdrawal from the "spheres of influence" in Persia, Afghanistan and China.

Turkey's claim for sovereignty and integrity thus falls in line with the Sovietic recognition of the principle of "national" independence. The economic demand of Russia for the freedom of the seas which up till now was really tantamount to Russian political command over Constantinople is henceforth transmuted into a policy of having Turkey rehabilitated among the Turks at Constantinople and in Thrace, both politically and economically.

THE ABOLITION OF "CAPITULATIONS"

A new chapter therefore begins in the relations of Turkey with the Powers. With France behind himself the Young Turk has crushed Greece, outwitted England and become master of Asia Minor. From this vantage-ground he is proceeding to utilize the backing of Russia

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and ignore his French sympathies and affiliations, if need be (November 1922).

His demands are exceedingly far-reaching. Turkey wants the Thracian and Syrian questions to be reopened in their entirety as well as that relating to the sovereignty of the islands off the Anatolian Coast. Nay, she wants to be complete master in her own house-hold. The long-standing source of financial and political vassalage, the "Capitulations", is now to be wiped off by war or by conference.

THE WAR FOR FINANCIAL SOVEREIGNTY

Extra-territorial privileges, legal, economic and political, similar to the "concessions" in China, had to be surrendered by Turkey to foreigners during the period of her weakness. Simultaneously came foreign domination over Turkish government through the administration of the two supreme financial institutions, the "*Dette Publique Ottomane*" and the "Imperial Ottoman Bank."

It is well known that the administrators of the *Dette* have absolute mastery over the revenues of Turkey derived from salt, stamps, spirit, fisheries and silk. The 3 per cent and 11 per cent *ad valorem* import duties are also in their control.

All this has to be thoroughly overhauled, says the Angora Government. Already on the 8th of October 1922 the foreign element in Turkish finance has been notified by the finance minister of Angora that every loan and advance made to the puppet Sultan at Constantinople since March 16, 1920, will be considered null and void.

At this juncture France and England are holding together. The Entente stands for the perpetuation of Turkey's financial and economic subjection to the foreigners. 'And in the struggle for emancipation Turkey is

counting on the friendly services of Soviet Russia bent as this latter herself is on seeking the freedom of her commerce against the rulers of the seas.

Altogether, new vistas are opening up before mankind in this challenge from Turkey. For it is of no less significance in contemporary international relations than was the event of 1905 with which Japan compelled Eur-America to recognize for the first time the philosophy of "Thus far and no farther", emanating as it has been, from the apostles of active resistance in Young Asia.

CHAPTER V

INDIA'S OVERSEAS TRADE *

MODERNIZATION IN INDIAN ECONOMIC LIFE

INDIA is fast becoming industrialized. In Bombay and the United Provinces cultivators have been getting used to modern agricultural machinery. Engines, pumps, threshing machines, petroleum-driven tractors, steam ploughing machinery and allied tools and implements are bidding fair to change the aspects of cultivation and irrigation in Indian villages.

The people have learned to be keen on improved methods and are displaying receptivity to new ideas. In Kashmir, Italian reeling machinery is being used in sericulture. The Japanese methods of growing the mulberry and rearing the insects are being practised in Mysore.

Ambitious schemes for utilizing the natural powers for industry have also found a suitable home among Indians. The first hydro-electric installation in Asia is the one in Mysore established in 1902. The Cauvery Hydro-Electric Works supply power not only to the Kolar gold fields which lie 92 miles away from the station but also to

(*) In this essay the figures have been given in approximate round numbers and Rs. 15 have been taken to be equivalent to £ 1.

the city of Bangalore which lies at a distance of 59 miles both for industrial and lighting purposes. Beginning with 6,000 electrical horse power the installation has the present capacity of 2,5000 horse power.

Nor is the vale of Kashmir in the north less touched by the stir and turmoil of modernism than is the progressive south. The Jhelum Hydro-Electric Works possess 20,000 h. p. The city of Baramula where the installation is located is of course lighted with electricity. The power is employed to operate the floating dredgers which dredge the river as well as to work the derricks which drain the swampy marshes in the neighbourhood. At Srinagar also, the capital of the state, 34 miles distant from the power-generating station, the current drives the machinery of the local silk factory as well as heats and lights the buildings. City lighting is likewise accomplished.

But the most stupendous installation of its kind is the Lonavla Hydro-Electric Works founded by Jamshedji N. Tata, which have been in operation since 1915. From these works energy is already being supplied to no less than 44 cotton and flour mills as well as to the Bombay Electric Supply and Tramways Co. Ltd. The capacity of the installation is 40,000 electrical h. p. Extensions are in progress in order to cope with the growing demand from the mills and factories of the city as well as to feed new electro-chemical industries developing in the vicinity.

India is today thus an economic region which is quite alive to advanced technological processes. The responses of the Indians to the latest inventions, wherever they may happen to be patented, are significant indications of the manner in which the social structure of the entire world is being transformed into a more or less uniform system. India can then be securely depended on as an expanding market for foreign goods and as an efficient partner in oversea commerce.

INDIA AS MARKET FOR THE LATE GERMAN EMPIRE

(a) STEEL PRODUCTS

To Indian traders in almost every branch Germany is an old friend. In pre-war days German manufacturers were some of the principal suppliers of Iron and steel on the Indian market. Of the total 1,000,000 tons of sheets, plates, beams, pillars, screws, wire, tubes, pipes, fittings, rails, hoops and strips imported by India in 1913—14 as much as 200,000 tons came from the German Empire. In this line of India's import trade Old Germany's place was only second to that of Great Britain whose exports amounted to about 610,000 tons. The tenacity of Indo-German steel trade has become evident in the fact that as soon as war embargoes were slightly lifted Germany did not fail to enter the Indian sphere "at the thin end of the wedge" with a trial shipment, so to speak, of 900 tons in 1910-20.

(b) CHEMICALS AND GLASSWARE

In India's import of chemicals, likewise, Germany was a very high second to the United Kingdom. In 1913-14 German chemicals on the Indian market constituted 12 per cent of the entire foreign stuff along the line of acids, sodas and salts while England's share could be defined at 74 per cent. Nor must it be ignored that in 1913-14 India spent £8,000,000 on German bangles, beads, bottles, chimneys, funnels, globes and other glassware.

(c) PAPERS

The same position of a high class second was noticeable for Germany in another not very mean branch of India's imports. Over £ 1,000,000 worth of printing, packing and other papers including paste board came to India from foreign countries in 1913—1914. German goods formed 17 per cent while English 56 per cent of the quantities absorbed.

(d) SUGAR AND MINOR COMMODITIES

Old Germany had also supplied the Indian market with sugar. India's import of German sugar was, however, only 700 tons in 1913-14, quite an inappreciable figure, no doubt, when it is remembered that sugar has always been one of the most important commodities for which India has depended on foreign countries. In 1913-14 India's sugar import amounted to over 800,000 tons in weight and over £ 10,000,000 in value, i.e. about 10% of the entire import trade.

Among minor exports from Germany which used to reach India may be mentioned matches. Materials for the manufacture of paper were also to a certain extent imported by Indian mills from Germany.

INDIA'S CONTRIBUTION TO GERMAN INDUSTRY**(a) COTTON**

India has been a source of raw cotton to Great Britain, Japan, Belgium, France, Italy, Spain, and even to the United States. The textile manufacturers of Old Germany were not unknown to the Indian cotton-dealers. With the end of the war the business tradition has but re-asserted itself. In 1919-20 about 50,000 bales of 400 lbs each were exported from India to Germany.

(b) JUTE

In India's exports raw jute and jute manufactures of Bengal make an item second in importance to raw cotton. German industry used to absorb a great deal of this produce. Exports to Central Europe in 1913-14 were calculated at 27 per cent of the total shipped overseas.

(c) HIDES

Hamburg was the great emporium of Indian hides in pre-war days. Germans were known to be the leather-merchants of India. In 1913-14 the German Empire absorbed more than one-third of India's shipments abroad.

(d) OILSEEDS

The cotton-seeds, ground-nuts, castor-seeds, rape-seeds, sesamum and other oil-seeds of India have had a considerable market in Europe. Old Germany used to occupy the third place as India's customer, the first being occupied by France, and the second by England. The German Empire demanded 16 per cent of this Indian export.

4,873

(e) MANGANESE

Ferromanganese is an ingredient in modern steel. For about a decade and a half previous to the outbreak of the war, steel manufacturers of the Rhineland were interested in the Manganese mines of the Central Provinces, Mysore and Vizagapatam. The German Empire vied with Great Britain and the U. S. in getting this valuable ore.

In 1919 the total output of manganese in the Indian mines amounted to 537,000 tons. And naturally not only the iron-industry but also the glass and porcelain factories of Germany are once more anxious to get consignments of the ore and peroxide. India is not likely soon to fade from Germany's attention although as a manganese-producing region her place is being challenged by Russia.

(f) WOLFRAM

Certain districts in Lower Burma had likewise for a few years previous to the war attracted the notice of Germany's "heavy industries". The mineral Wolfram (tungsten ore) which is needed in the manufacture of high speed steel has been worked in the districts of Mergui and Tavoy since 1909. In 1919 the total output of Indian Wolfram was about 3,500 tons, and this amounted to 25 per cent of the entire Wolfram production in the world. It is interesting to observe that Germany's demand absorbed not less than half of Indian Wolfram.

THE A. B. C. OF INDIA'S FOREIGN TRADE

This retrospect, cursory as it is, will not have failed to indicate the lines of least resistance along which, normally speaking, German industry and trade may expect to advance in their Indian relations now that the war-conditions are getting to be fairly over.

But several outstanding features of India's overseas commerce call for notice.

First, the lion's share in the total trade of India has always belonged to her political and military overlord. In 1913-14 the British Empire commanded 52 per cent of Indian imports and exports leaving 48 per cent to the rest of the world. Almost the same proportion, viz. 51 to 49, has been observed in 1919-20.

Secondly, among the claimants to this 48 or 49 per cent the two most important factors are Japan and the United States. In 1913-1914 Japan's share in the Indian overseas trade was 6·4 per cent and America's 6·2 per cent. The war gave a great fillip to the development of both these countries in the Indian trade. Indeed, Japan made an extraordinary advance, but the peace-conditions have demonstrated that it was only ephemeral. In 1919-20 Japan was responsible for 12·3 per cent of India's foreign trade while she was outdistanced by the United States whose share was 13·8 per cent. As both these powers may be said to a considerable extent to have replaced the German Empire's hold on the Indian commerce, traders of New Germany will find in Japanese and Americans their first and foremost competitors both in sale and purchase, competition from the British side being of course taken for granted as a first postulate.

In the third place, Indians themselves are at present a self-conscious and creative unit in manufacture and trade. A veritable New India has been generated by the

war, — both by its politics as well as by its industries. In her renewed relationships with India commercial and industrial Germany will have to take note of the manifold activities which characterise the *swadeshi* movement of Young India.

JAPAN VS. LANCASHIRE IN INDIAN IMPORT

The story of the struggle between Japan and England on the Indian import market in regard to cotton manufacturers is of abiding interest to all exporters from the Continent.

(a) COTTON YARN

Previous to the war, say in 1913 to 1914, India imported altogether 44,000,000 lbs of cotton twist and yarn. But of this not more than 2 per cent came from Japan whereas Great Britain was responsible for 86 per cent. During the war British manufacturers had in several important directions to retire from the Indian market which was left almost as a monopoly field for the enterprise of their Japanese allies. In 1918 to 1919 (armistice year) the Japanese exporters of cotton twist and yarn were thus in a position to command as high as 72 per cent of India's imports while England's share was reckoned at only 25 per cent. But the next year (1919—1920), the first full year after the war, has seen England practically recover her old position with 81 per cent while the amount of the Japanese hold on the Indian market is represented by 13 per cent, a figure frankly tantamount to repulse.

(b) COTTON PIECE-GOODS

Japanese retreat is noticeable all along the line. Japan had succeeded in invading the Indian market with cotton piece-goods to the extent of being a powerful competitor to the British manufacturers. The pre-war share of Japan in the trade in grey unbleached piecegoods was as low as 5 per cent and that in coloured, printed or dyed goods not

more than 2 per cent while that in white piece goods was quite negligible. But the abnormal conditions created by the war furnished Japan with plenty of loopholes through which she could swamp the Indian market.

In 1918—1919, for instance, of the 583,000,000 yards of unbleached goods imported by India Japan accounted for as high a proportion as 35 per cent, of the 227,000,000 yards of coloured goods the Japanese stuff was 9 per cent and about 4 per cent of the 206,000,00 yards of white; blacked piece-goods also were exported from the textile factories of Japan. But the trade balance for the year 1919-20 shows Japan with about 12·5 and a little less than 1 per cent respectively in the three classes of cotton piece-goods imported by India from abroad.

It is only in cheap hosiery, shirting, sheetings, prints, checks etc. that Japan continues still to be in evidence. But the competition of Lancashire is too keen to allow Japan a place higher than that of an undesirable intruder.

JAPANESE EXPORTS IN THE TEETH OF BRITISH COMPETITION

Similarly Japan has not been able to maintain her hold in the market for machinery and mill appliances. In 1918-19, of course, Japanese cotton and jute mill machinery and electrical goods were valued at somewhat less than £ 200,000, which, however, was but 4 per cent of the goods absorbed by India from abroad. But in 1919-20 in India's consumption valued at about £ 6,40,000 Japan's share was as low as £ 60,000.

Tools of all sorts including agricultural implements, metal lamps, gasmantles, enamelled iron ware, cutlery, pruning knives, builders hardware and so forth, used to come into India in heaviest proportions (57 per cent) from the United Kingdom in pre-war days. But during the war Japan made a successful entry into the market and supplied

as much as 29½ per cent of India's requirements in 1918-19. But British competition has driven her from a great part of her new conquests in 1920, leaving 19 per cent to the exporters from Japan.

The amount of foreign liquors consumed in India was, estimated at £ 2,250,000 in 1919-20. Japanese beers, ales, etc. drew about £ 230,000, a figure considerably lower than that in the previous year.

In 1918-19 Japanese papers constituted 25 per cent of the entire paper consumed in India. Japan's success was tremendous, for she had not only risen from her insignificant 1 per cent of pre-war days to this height but also because she had practically eclipsed England as a source of supply in regard to paper for the Indian market. But Japan's collapse during the next year has been no less tremendous, for in 1919-20 India has imported not more than 11.6 per cent of her foreign papers from this Far Eastern ally of Great Britain.

In 1913-14 Japan was not known to be a source of iron and steel in the Indian market. But by 1918-19 Japanese sheets, plates, tubes and hoops had acquired immense proportions, weighing over 15,000 tons, i.e., 8 per cent of India's total import. The next year, however, Japan has been pushed down to a very low level. Not much above 2,000 tons in the grand total of over 425,000 tons has been supplied by Japan in 1919-20.

Japanese chemicals became very popular during the war and in 1918-19 rose almost to 25 per cent of the foreign acids and sodas consumed in India. But in 1919-20 they constituted only about 12 per cent, slightly lower than the proportion maintained by German chemicals in pre-war times. Although Japan is still the second great source of supply to India in regard to chemicals, and although her advance from the 1.5 per cent level of 1913-14 is noteworthy

thy, the fact remains that while in 1919-20 England has resumed her pre-war position of about 75 per cent Japan is declining more rapidly than she rose.

THE VOLUME OF INDO-JAPANESE TRADE

But all the same the Indo-Japanese trade remains quite bulky in volume. In 1919-20 India imported from Japan about £ 13,000,000 worth of goods. The value of Indian export was about £ 32,000,000.

Japanese supply of sugar for the Indian market is maintaining its upward level. In 1919-20 Japan exported 1400 tons of sugar to India, i. e. double the amount imported from Germany in 1913-14. And this is 14 times the amount she exported in the pre-war years.

As in sugar so in glass, glassware and matches Japanese grasp on the Indian consumer continues to be firm. Besides India's demand for Japanese silk, both yarn and piece-goods, has not declined.

On the whole India's Japanese imports decreased from 20 per cent in 1918-19 to 9 per cent in 1919-20. But on the other hand Japan has grown higher as a buyer of Indian goods. In 1918-19 Japan consumed 12 per cent of total Indian exports. But in 1919-20 Japanese consumption of India's shipments abroad amounted to 14 per cent.

Raw cotton forms the preponderating element in Japan's demand for India's produce. In 1919-20 it was as high as 88 per cent. Raw jute, raw skins, bones, shellac, manganese, sesamum and so forth are the chief exports of India to Japan. And naturally with the opening up of Germany and Central Europe in the Indian trade, Japan will have to experience the competition of European manufacturers even as a purchaser of Indian goods.

GERMANY vs. UNITED STATES

Leaving the British Empire from our present consideration the first important competitor of Germany in

the Indian trade then is Japan. And the second is the United States. Or, rather, if the figures for 1919-20 indicate a somewhat permanent change in the direction, the United States should be considered to be the most powerful competitor because by that year the American exporters have risen to the second position in India's trade overseas pushing Japan to the third, the British Empire always of course heading the list. The United States sold about £ 17,000,000 worth of goods to India and brought Indian commodities valued at £ 33,000,000.

So far as imports to India are concerned the story of the expansion of the United States demands the closest watch on the part of Germany. Machinery, hardware, steel, and iron products, motor cars and cycles, rubber tyres and tubes are the goods which America has been delivering to India these last few years. And these are just the stuff for the disposal of which Old Germany used to seek the Indian market.

INDIA'S CONSUMPTION OF AMERICAN MANUFACTURES

(a) IRON AND STEEL

In 1913-14 while Germany sold 200,000 tons of iron and steel to India, the United States sold only 22,000. But during the war American steel products almost equalled in volume the British wares on the Indian market, rising as high as 76,000 tons in 1918-19. And in 1919-20 India consumed no less than 134,500 tons of galvanized and tinned sheets, hoops and strips, cast pipes and fittings, girders, pillars, bridge work, angles and springs manufactured in the workshops of the United States. America supplied 32 per cent of the total imported into India.

(b) MACHINERY

The United States has grown into a chief source of jute mill machinery and electrical plants, knitting machines, oil crushing machinery shuttles etc. for India.

The growth has been steady, from 3 per cent in 1913-14 to 30 per cent in 1919-20. That year America sold about £ 1,900,000 worth of machinery to India. It is interesting to observe that of the 12,000 type-writers bought by Indians during that year about 10,000 came from the United States.

(c) DOMESTIC HARDWARE

India consumed about 1,500,000 metal lamps manufactured in America and their worth was £ 200,000. In domestic hardware, agricultural implements, cutlery, enamelled iron goods, and lamps the United States has risen from 10 per cent in 1913-14 to 30 per cent in 1919-20.

(d) MOTOR CARS

The same growth is noticeable in America's export of automobiles and motor cycles to India. In a total of 9925 cars (valued at £ 1,700,000) consumed by India in 1919-20 the contribution of America was 9353. The same year England supplied only 448 cars while it is not out of place to mention that in 1913-14 American cars imported into India were 868 as against English 1669.

(e) PAPERS AND CHEMICALS

American paper has likewise grown into the most noticeable commodity of the Indian market. In 1919-20 of all the different kinds of foreign papers bought by India 25 per cent came from the United States. In pre-war days, however, American paper was all but unknown in India. American chemicals and liquors, although they have not advanced in the same proportions as the papers and engineering goods, have been maintaining their almost steady upward curve.

UNITED STATES AS INDIA'S MARKET

To-day the United States is a most valuable market for Indian goods. The raw materials of India are being demanded as eagerly in America and Japan as they were

formerly in Germany. German importers will accordingly have to encounter as keen a competition from the American and Japanese buyers as German exporters from the manufacturers of the two lands. To what extent Indian produce is being sought in the United States will be apparent from a few figures in regard to the exports from India.

(a) RAW COTTON

In 1918-19 the United States bought only 2,400 bales of raw cotton of 400 lbs each. But in the 1919-20 she raised her purchase to 17,700 bales. The figure is almost infinitesimal when we remember that the entire export amounted to 2,398,600 bales. But the rate of increase in American demand for Indian cotton must not be overlooked by prospective buyers.

(b) JUTE, RAW AND MANUFACTURED

(£ 15,500,000.)

American demand for Indian jute is no less on the increase. 1919-20 India exported 77,600 tons to the United States, not an inappreciable amount, for the total export did not weigh more than 591,800 tons. In any event the increase in American demand from that in the previous year was 27 per cent.

In 1918-19 the United States took 639,000,000 yards of gunny cloth. The next year's demand was represented by 819,000,000 yards.

(c) HIDES AND SKINS

(£ 11,300,000.)

In 1918-19 the United States took only 420 tons of raw cow hides. But in 1919-20 she imported from India 15,200 tons out of the total of 39,400 tons shipped abroad. America's consumption of raw buffalo hides was 55 per cent of the total 11,600 tons exported. Raw goat skins weighing 30,100 tons were exported to the United States in 1919-20 while the corresponding figure for 1918-19 was 18,800.

Again while only 50 tons of tanned cow and buffalo hides were sold to the United States in 1918-19, the next year American demand rose to 1300 tons.

Tanned goat and sheep skins also have had a growing market in the United States. In 1918-19 India exported to America only 400 tons but the figure was doubled in 1919-20.

(d) SHELLAC

In 1919-20 India obtained £ 4,600,000 by selling shellac in foreign countries. Of this about two-thirds i.e £ 3,000,000, came from American purchasers.

THE SWADESHI MOVEMENT

The Great war (by eliminating German and Central European competition) has thus created two new factors in the Indian sphere both as purchaser and seller. Incidentally it has helped forward also the development of India itself as a strong industrial unit.

The vacuum created by the closing of Germany and Central Europe to India could not all be filled in by Great Britain alone nor by Great Britain, Japan and the United States combined. Indians found themselves in a situation in which foreign imports were not enough to meet the existing demands of the country. Conditions were therefore ripe for utilizing in India itself the natural resources of the country and working them up into finished products.

In short, the *swadeshi* movement, the movement for the development of indigenous manufacturing power, which had been in operation since the first boycott of British goods (August 7, 1905) obtained at last its most appropriate economic pre-conditions. India is not to remain any longer a chiefly agricultural country exporting as it did its raw produce abroad but also a manufacturing entity as well.

And, as the whirligig of fortune would have it, the same *swadeshi* (home-industry) movement which had been opposed tooth and nail by the British government and Great Britain's manufacturing and commercial interests both openly and secretly, came to find patrons and allies in its whilom enemies. In order to strengthen her economic and financial staying power in the fight against Germany, Great Britain was compelled to engineer the industrial capabilities and resources of the Indians, and thus in spite of herself to help building up an industrial India such as she had ever hindered by legislation and coercion.

The war against Germany is over, but Great Britain is now arming herself for new wars. And so according to the findings of the Esher Military Commission (1920) India is to be strongly equipped as a base for British operations in Western, Central and Eastern Asia. Consequently the industrial fortification or preparedness for the next war is proceeding apace in India.*

It has been decided by the British government to encourage wherever possible the creation or strengthening of "key" industries within Indian "boundaries." A "Chemical Services Committee" for instance, was appointed in 1920 under the presidentship of J. T. Thorpe in order to advise measures calculated to promote the chemical armament of Great Britain's Indian dominions with an eye to the eventual enemies of to-morrow.

Thus, from both sides—through the creative initiative of the Indian's against Great Britain's control, as well as through the efforts of Great Britain in order to exploit Indian resources against her own enemies—the industrial *swadeshi* movement of India has grown into a

* Vide in this connection chapter on "The Problems of Singapore" in my *Politics of Boundaries*, (Calcutta, 1925.)

new force in the civilization of the world to-day. And altogether not less than Japan or the united states is India itself tending to be a rival of Germany in the Indian sphere.

INDIA AS INDUSTRIAL POWER

The strength of Indian industry is evident in everyline.

In ten years the tiny village of Sakchi in Chhota-Nagpur has grown into a world's most famous city of iron and steel with a population of 80,000 inhabitants. The railway lines which were built during the war for the transportation of troops to Salonica, Egypt, East Africa, Mesopotamia and Palestine were turned out at the factories located in this township. These are the celebrated Iron and Steel Works founded by Jamshedji N. Tata, one of the pioneers Indian *swadeshi* industry, from whom the city is now called Jamshedpur.

Tanning of hides and skins has also developed into a big Indian industry. In 1913-14 India exported 8,700 tons of tanned hides. In 1919-20 the shipment amounted to 24,000 tons, of which no less than 93 per cent was destined for England.

The number of jute mills has increased from 64 in 1913-1914 to 76 in 1919-20. There were 744,289 spindles and 36,050 looms in the pre-war year, while in six years the respective figures rose to 855,307 and 41,045. As a result India was in a position to raise her quota of exports by 77 per cent in 1919-20 from that in 1913-14. The number of workmen has risen from 208,000 to 275,000.

There are five woollen mills in British India and one in Mysore. The number of spindles employed in the five mills is 39,608 and looms, 1,155. The Mysore mill employs 1,430 spindles and 45 looms.

In 1919 Indian breweries produced 6,698,000 gallons of liquors. In 1913-14 the production was 3,654,000 gallons. The number of breweries is 20.

The same year 31,000 tons of paper were manufactured in the Indian paper mills, while 21,638 tons were imported. There are at present altogether 9 paper mills throughout India.

The cotton twist and yarn manufactured in Indian mills has been able to replace foreign stuff to a very considerable extent. In 1913-14 the imports amounted to 44 million lbs. But in 1920 they came down to 15 million pounds. In regard to lower counts the Indian mills at present enjoy a monopoly. An average of about 650 million pounds of twist and yarn per year has been spun in the textile factories of India during the period 1913—1920.

So far as cotton piece goods are concerned, India's independence of foreign imports has also been quite phenomenal. The imports have gone down from 3,197 millions yards in 1913—14 to 1,080 million yards in 1919—20. During the same period the output of grey, white and coloured manufactures in Indian mill has increased from 1,164 million yards to 1,640 million yards. The triumph of *swadeshim* is unchallenged.

The increase in the turn-over of yarn and woven goods has led to a steady growth in the number of spindles and looms as well as in the number of employees. In 1905, for example, the year of the first declaration of boycott against British cotton manufactures, there were altogether 197 mills with 5,163,486 spindles and 50,139 looms. In 1919 the number of mills was 258, working 6,689,680 spindles and 118,221 looms. The number of workmen has increased in 15 years from 195,277 to 293,277.

In 1919—20 there were 906 new companies started in British India and Mysore. The total authorized capital was distributed over banking, insurance, navigation,

textile industry, jute mills, woollen and silk mills, presses, tea plantation, coal and other mining, and so forth.

Evidently not all the capital invested or to be invested in the Indian factories, workshops and banks is purely Indian. But whether the capital be Indian or foreign, and whatever be the proportion of the net earnings which falls to the share of the Indian as contrasted with the non-Indian employer classes, so far as the relation between exports and imports is concerned, new conditions are manifesting themselves in every walk of commercial life. And, of course, the social consequences of capitalistic development—the problems of labour—incidental to “modernism” in manufacture and trade organization—are already quite patent.

While recording the statistics of “large scale” manufacture one should not omit the endeavours in the line of “small industries” which has been engaging the technical and commercial brains of the Indians since the event of 1905. The kind of success the movement has attained during these years has been annually registered for instance at the *Messes* or fairs of Calcutta, called the *Swadeshi Mela*.

At the last of these *melas* or fairs, held in April, 1922, the most prominent place was occupied by the new inventions in *Charkha*, the hand-spinning wheel, which has become almost a household word, as it had once been a household commodity, owing to Mohandas Karamchand Gandhi's enthusiasm in its favour as a weapon against Great Britain's industrial domination of India. Match-making machines, motor accessories, syringes, combs, buttons, enamelled earrings, lockets, clay models, chrome leathers, soaps, oil cloths, preserved fruits, cutlery and other exhibits of the year point to the channels along which the manufacturing mind of Bengal has been working.

THE OUTLOOK FOR GERMANY

Germany's chances for recapturing her old market in India as well as for buying Indian produce for her manufacturing factories are still plentiful.

In the first place it must be remembered that although in terms of *money* the value of Indian imports and exports was higher in 1919-20 than in 1913-14 the total amount of shipments in *quantity* was actually less. There was a diminution of imports by 45 per cent and of exports by 19 per cent.

Similarly in regard to tonnage and freights a great diminution is to be noticed. In 1919-20 shipping entered with cargoes aggregated 5,166,320 tons while the figure for 1913-14 was 6,784,883 tons. In 1919-20 the shipping cleared with cargoes totalled 6,163,853 tons as against 8,252,187 tons in 1913-14.

In the second place, the more modern and industrialized India grows to be, the more secure does she become as a market for the specialities in machinery and chemicals in which lies the strength of Germany as a veteran manufacturing power. Higher standards of technical perfection and superior qualities in the products are bound prevail with discriminating and critical minds in India as elsewhere.

In the third place, both agriculturally and industrially as well as educationally, India has too long been kept by its alien rulers at a miserably undeveloped stage. With adequate "cultivation" both in the intellectual and economic sense India should grow into a continent with at least four times its present producing and purchasing power. In other words, a free and fully developed India would be in a position to absorb at least four times its present imports of foreign goods and also export four times its present consignments in raw produce and manufacture.

An industrialized and independent India is really a four-fold more efficient and enduring unit in the exchange of world's commerce and culture. And New Germany, now that she has been deprived of her colonies, has everything to gain from such a consummation in Southern Asia. A world, in which colonies and colonialism are things of the past, will offer the best chances to German trade and industry.

The strategy of the new commercial warfare is clear. But so far as reviving her trade with India is concerned Germany will have to revise her tactics to a certain extent. New Germany will have to meet Young India half-way.

In the first place, in order to popularize the products of German factories and the methods of German business in general, young Indian chemists and engineers should be given facilities in Germany to work as apprentices in the first-class manufacturing houses. About one thousand Indians, trained for a period of, say, three years in German workshops and commercial and banking establishments, would prove to be the greatest advertisers of Germany's industry and trade.

Indian experts educated in German technique will naturally be interested in translating German scientific and technical literature into the Indian languages and serve as the best apostles of German *Kultur* as well as the most reliable media of *direct* commercial transactions between India and Germany. The time seems to be quite opportune, as Indians have begun to study German language at home and have been coming out to Germany in large numbers for travel, investigations research and business opportunities.

And in the second place, while getting oriented to these new developments in the Indian situation, New

Germany should learn to recognise that Indian commercial travellers or agents, Indian export and import houses in India or abroad, and Indian bankers and industrial experts of tried merit are of at least as much worth as are the commission houses, agencies and importers on the other side of the North Sea. And in this respect German business men and bankers might as well take a hint from their American competitors. "Indian merchants of standing", says the United States consul at Karachi in his report to the Department of Commerce, Washington, D. C., "are fully as reliable from a credit standpoint as British or continental firms. Their financial resources are in many cases large and their regard for the ethics of commerce punctiliously faithful."

CHAPTER VI

THE ECONOMICS OF DEFEAT

THE SOCIAL PHILOSOPHY OF TO-MORROW

THE Great War has opened mankind's eyes to facts. It has taught the world to be frank in its appraisal of the importance of wars. The "next war", its theatre, its *modus operandi*, the preparations for it are therefore being openly discussed by far sighted people everywhere.

A fresh and great step has thus been won in science and civilization. The "economic interpretation of history" is no longer to constitute the backbone of the social philosophy of to-morrow. It bids fair to be modified and to a certain extent replaced by the "militaristic interpretation" of culture and racial evolution. Scientific and philosophic thought was long waiting for such a challenge to the viewpoint, monistic as it is which had almost obsessed mankind during the preceding generation.

THE MILITARISTIC INTERPRETATION
OF HISTORY

Since Versailles there have been held in Eur-America about two dozen international congresses. But whether it be the conference at Washington (1921) convened ostensibly to discuss the Pacific and the Far East or the one at Genoa (1922) to grapple with the financial problems of Europe, the nations are seriously bent on one thing. The greatest amount of military naval-aerial security and strength is the goal sought by every living group of human beings.

Bolshevik Russia is being courted even by France in order to provide against the rainy day. The Pope of Rome and the arch-rebel Mussolini are being greeted in the same breath by the King of England in order to assure Italian support of British politics in the Mediterranean.

The Mosul oilfields and Turkish finances seemed to be looming large at Lausanne. But even these "economic agencies" are but the "keys" to military power such as only the initiated know how to use.

In July 1914 Great Britain was anxiously organizing the world *bloc* against Germany. In July 1923 the same power is engineering the isolation of France.

According to experts of the French navy, as explained in *Le Journal* (Paris) the world has gone beyond the age of the "politics of petroleum." It is the "strategy" of petroleum, consisting in the problem of constructing special submarines for the transportation of oil, that deserves the closest attention.

And England, on her side, is preparing for a three power airfleet.

Finance, industry, technique, diplomacy,—all are tending to the same consummation, *viz.* the acquisition of

strength for war purposes. This is the story of successful nations, Japan included.

THE SOCIOLOGY OF FAILURE

Success is a more fascinating study than failure. That is why the world has more literature on freedom than on slavery and subjection. More is known of victory and glory than of defeat and shame.

But the "militaristic interpretation" must take cognisance of this other side of the shield also. It is not enough to understand the world in terms of conquerors, empire-builders, master-races. The culture, the view of life, the psychology etc. of the subject races or the slaves as well as of the defeated peoples are no less important items for the student of social history.

India is quite well used to the sociology of subjection but she has forgotten the fact of "defeat." Germany to day, on the other hand, as an instance of crushing defeat, is a living laboratory for the investigation of processes in social causation. The world of science has much to learn from both.

As a subject race Indians tamely swallow the fact that they must lose one crore of rupees on the railway of their country during 1922-1923. They know also that they must pay out of their national revenues more than 60 per cent in order to maintain an army, a navy and an airfleet which an alien race demands for its aggressive operations against the peoples of Asia. And Indians know a thousand other things in industry, tariff, banking exchange and what not.

But what is defeat? Let Germany answer.

THE TERRITORIAL LOSSES OF GERMANY

All the colonies have been lost to Germany. This oversea loss is not merely territorial but economic and military as well.

The other territorial losses are inland. These have led to a diminution of Germany's population by 10 per cent.

The losses engendered by territorial redistribution have deprived Germany, further, of 25 per cent of her coal resources and 80 per cent of her ores.

Germany has lost, besides, 6.5 per cent of her railroads and 12.5 per cent of her waterways.

CESSIONS OF PROPERTY

The value of property which Germany has been compelled to cede to the *Entente* has been estimated by German experts like the late Foreign Minister Rathenau to be worth about £ 2,000,000,000. The inventory is made out in the two following groups.

DISBURSEMENTS FROM EXISTING STOCKS AND CESSIONS OF PROPERTY IN GERMANY AND ABROAD

1. Government property (exclusive of Eupen-Malmedy on the Danish frontier, Alsace Lorraine, and Colonies).
2. Saar-Mines.
3. Private and state cables.
4. Non-military goods and material left by the troops in the evacuated territory on the western front.
5. Railway and other bridges over the Rhine (Badenia Share.)
6. Shares of the Morocco State Bank and securities handed over in accordance with article 260 of the peace Treaty.
7. German property liquidated in enemy countries.
8. Amounts owing to Germany by her former allies which were ceded to the *Entente*.

Sum total £ 1,500,000,000.

DISBURSEMENTS FROM ECONOMIC ASSETS AND
CURRENT PRODUCTION

1. Railway material delivered under the armistice, including spare parts for rolling stock and motor lorries, railway rolling stock in the lost territory (including Upper Silesia, but excluding Memel district on the Polish frontier and Eupen-Malmedy) on the Danish.

2. Ocean steamers and trawlers, river and lake craft, harbour equipment.

3. Coal without by-products.

4. Disbursements under the armistice and for reparation account (by-products, cattle, dyes, drugs, machinery, implements, wood, Louvain University, art treasures, etc.)

Sum total £ 550,000,000.

CASH PAYMENTS

Germany has not had to make heavy payments in cash. But the total comes up to £ 107,000,000.

The items are indicated below :—

- (1) Payments in foreign drafts and bank-notes.
- (2) Sales of destroyed or scraped war material (scrap).
- (3) Customs receipts in the Rhineland and other revenue from sanctions imposed in 1921.
- (4) British export duty (Recovery Act).
- (5) Sundries (Alsace-Lorraine war-cost, Franco-German pension agreement, securities to the Guarantee Commission).

EXPENSES FOR FULFILMENT OF THE TREATY OF
VERSAILLES

It is not enough to be defeated in war or litigation. One must have to "pay all costs" of the victors. The expenses incurred by the victors while they are engaged in recovering the costs must also have to be borne by the vanquished.

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Between the armistice and July 1922 Germany accordingly has had to be responsible for the following figures :—

	Paper marks.
(1) Compensation payments ...	22,411,000,000
(2) Cost of the Army Occupation...	14,000,000,000
(3) Expenses of the Inter-Allied Commissions. ...	2,900,000,000
(4) Payments under the provisions of the Treaty of Versailles apart from reparations (restitution and substitution of cattle, machines and other material, surrender and destruction of war material)...	6,340,000,000
(5) Inland Expenditure incurred by the carrying out of the peace treaty (compensation for Germans abroad and in former German colonies, relief for the German fugitives from the ceded territories etc.) ...	7,256,000,000
(6) Handed-over to the Guarantees Committee as security. ...	3,375,000,000

ECONOMIC CONSEQUENCES OF THE DRAIN

Germany, defeated in war as she is, is then being “drained” of her wealth.

German economists, nay, their Swedish, American and English friends, seem at last to be visualizing a situation which in the economic psychology of the Indian nationalist has long been characterized as the “drain.”

And how are the German thinkers arguing ?

“At the present moment,” say they, “Germany lacks the necessary minimum of existence wherewith to maintain the masses of her population.”

The farmers and landowners are said to be suffering from lack of capital which prevents them from buying the artificial manure needed by agriculture. It also prevents them from cultivating the soil on a more "intensive" scale? Agriculture is becoming wasteful and less remunerative.

Industry is suffering from the difficulty of obtaining raw materials and from lack of coal. Whereas both were formerly available in Germany, they have now to be imported. The productiveness of labour is reduced hereby, although its unremunerative nature is frequently veiled by the process of depreciation of the currency. "The development of large vertical concerns is on the increase, although it would be healthier if the productive forces were to combine in horizontal fashion." The reason for this is that all the remunerative undertakings wish to ensure their being supplied with coal and raw materials under conditions which do not vary.

THE PHILOSOPHY OF IMPOVERISHMENT

The impoverishment or decay of the German nation is the theme on which Germany's social philosophers as well as patriots have therefore been harping.

The process of national decay does not take place simultaneously with an equal degree of intensity in all spheres. The different social groups are affected one after another.

(a) *Brain-Workers*

The first groups to be affected are those whose labour was performed in the past, and who have converted a certain part of the produce into money which they have saved. Persons of small independent means, war cripples, the widows and families of soldiers killed in war, etc., form such groups.

Next come the liberal professions—artists, savants, lawyers, etc. These groups are ruined because the demand for their labour constantly decreases. The decline of that labour (*e.g.* of scientific research) only makes itself felt in the social organism at a later date, when industry and trade have completely consumed the intellectual capital formerly supplied them by the liberal professions.

The third in order are those groups which are composed of the teachers of the nation in the wide sense of the word (school-masters, members of the Press, etc.) In Germany to-day they are rapidly collapsing. Germans are fearing a diminution in the cultural acquirements of the coming generation.

(b) *Manual Workers*

The handicraftsman is affected sooner than the industrial wage-earner. Only large enterprises, in which a certain remnant of capital is still available, are able to hold out.

As for the industrial labourers, those whose labour is not directly bound up with the raw materials of the country, and who are consequently unable to exert by their labour any influence on the factors which determine its remunerativeness, are the first to suffer. This is the case with the workers of the textile and printing industries, etc. Then come those wage-earners whose labour depends on progress, such as stone masons.

Later on, it is the turn of the other industrial labourers, whose ruin entails the ruin of what still remains of industrial undertakings. To-day German industry is making desperate efforts by combining its enterprises on a large scale to obtain control of those factors which determine the productiveness of labour.

(c) Agriculturists

Finally comes agriculture. The latter, it is true, cannot entirely collapse unless grave disturbances should bring about its ruin. But it may be so impoverished that it will only be able to feed the rural classes. No surplus of its produce will be available for consumption by the other elements of the population. Its intensity will be reduced and scientific methods of tilling will have to be abandoned.

(d) Public Servants

The case of those categories of the nation which are connected with the means of transport and communication, and the case of the officials, are peculiar ones. Transport workers and officials will continue to exist as long as the country is able to keep up what is indispensable in the way of public administration and of means of transport.

(e) Traders

Genuine trade is said to be going to ruin for lack of capital. Capital is the medium by means of which commercial intercourse is rendered possible. But spurious trade is everywhere cropping up. It reminds one of flies buzzing around a corpse in a state of decomposition, if a very pessimistic picture is to be taken.

The sources of this sort of trade are four in number decreasing traffic, depreciated currency, wasteful expenditure, transfer of valuable property.

Large numbers of people are compelled to sell property of all descriptions. That sort of trade which is characterised as spurious, and which is morally illicit, buys such property from its impoverished and inexperienced owners for low prices, and resells the same at a large profit.

Some time back the juncture was particularly favourable for the sale of furniture and houses; now it is the

turn of the precious metals, and gold and silver dealers have sprung up everywhere like mushrooms—so many festering wounds in the body of the nation, which are not always correctly diagnosed.

Social decay ends in starvation, disease and death ; and it is also accompanied by an alarming increase of crime.

Both in fact as well as in ideology the German situation will thus be found to be akin to the Indian. Only, India represents a much lower stage in brain-power, productive capacity and general culture than Germany. But all the same, students of race-psychology will not fail to notice how "adversity makes strange bed-fellows." ¹

CHAPTER VII

THE STINNES COMPLEX IN GERMAN INDUSTRY

AT home and abroad is no man of Germany to-day more talked of,—discussed, criticised, condemned and applauded—than is Herr Hugo Stinnes. Whatever part in politics and social life he may have played in the past or is playing in the present, Stinnes is first and last what German call a *Grossindustrieller* ² or "great-industry-man" like Krupp, Thyssen, Kirdorf, Haniel and others. All these names are associated with the great industrial

¹ While, on the one hand, Keynes' economic interpretation of the Treaty of Versailles is appreciated by the Italian economist Einaudi as an elegant exposition of the dangers into which European economy has been thrown by the peace-dictators at Paris, the victory over Germany is, on the other hand, valued as a great boon to Italy. See Einaudi's *Gli Ideali di un Economista* (Florence, 1921). "Terrible would have been the fate of 'inferior' people, as Italians were called," says he, had the Bismarckian-Marxian militaristic-communism succeeded in overpowering the allies.

² Biographical and historical accounts of the "great industries" may be read in C. Matschoss's *Krupp 1812—1912* (Berlin 1912) and *August Thyssen und Sein Werk* (Berlin, 1921). See also the same author's *Preussens Gewerbeboerderung und ihre Grossen Maenner 1821—1921* (Berlin 1921).

concerns of North-western Germany,—in Rhine-Ruhr. And as a great-industry man, further, Stinnes is one of the greatest representatives of "trustification," a process which has been fast attacking German economic life in almost every branch. "From the raw material through the half-manufactured products to the finished goods,—all the stages in an industry are to be united, owned, administered or controlled by one organisation,"—this is the shibboleth that may be said to be the very life-blood of the Stinnes concerns. The name Stinnes consequently spells to-day in German economic thought more of an abstract, universal, and generalized conception than a concrete personality or institution.

NEWSPAPERS AS MANUFACTURED GOODS

Stinnes has of late been known as a newspaper-man. He is the proprietor of the *Deutsche Allgemeine Zeitung*, the well-known daily of Berlin, which previously under the old regime had been the organ of the government, and of about a dozen other newspapers. To what extent, however, the Stinnes papers cater to political propaganda in the manner of Lord Northcliffe's organs is not yet patent. But one thing is clear that the journals constitute in the business eyes of Stinnes nothing but a link in the chain of half a dozen industries which supplement one another in the series of markets and goods.

Fundamentally, as is well-known, Stinnes is a coal man. The interests of mining have led him to wood and timber. He is the owner of vast forests in Eastern Prussia. In order to utilize forest produce he has undertaken the manufacture of cellulose and paper in several factories. These manufactured goods, however, are but "raw materials" for which a market has to be sought. So Stinnes has brought great printing and publishing houses like the *Berliner Druckerei Buexenstein* and the *Norddeutsche Buchdruckerei und Verlagsanstalt*, both located in Berlin.

The journals constitute thus a form of natural evolution in the line of "manufactures" which have their starting point in the forests.

COAL, IRON, ELECTRICITY AND SHIPPING
(1893-1919)

The Stinnes concern began in 1893 just thirty years ago—in a coal mining enterprise in the Ruhr valley with a capital of 50,000 Marks (Rs. 37,000).

In 1901 iron and steel attracted Hugo Stinnes and the *Deutsche Luxemburgische Bergwerks and Huetten A.G.* was established at Bochum with a capital of one million marks. This proved to be the centre of attraction for a number of huge coal and foundry factories. By 1911 the *Deutsch-Luxemburgische* commanded the annual delivery of 5 million tons of coal, 13 million tons of coke, large quantities of ammonia, tar and benzol, as well as machines and tools for mining and furnace industries. Not only the Ruhr region but the Saar and the Mosel valleys as well came to be dotted over with the Stinnes industries. And with Bochum or Dortmund as centre, the Stinnes exports commanded the entire Rhineland, Belgium and the lands overseas. By the time the war broke out there were 40,000 working men employed in the *Deutsch-Luxemburg* concern.

The third direction in which Stinnes early displayed his interest is electricity. In 1898 he founded the *Rheinisch-Westfaelische Elektrizitaetswerke A. G.* with headquarters at Essen. It was conducted independently of the *Deutsch-Luxemburg* but grew rapidly to such an extent that by 1912 not less than 25 cities of the Rhine-Ruhr were being supplied by it not only with electric current but also with gas and the respective installations.

Finally, among the pre-war enterprises of Stinnes must be mentioned shipping, both inland and maritime. The Hugo-Stinnes Navigation Company, consisting of 13 ships owned by itself, was furnishing the European as well as extra-European coasts with coal, ores, timber and grains.

WAR INDUSTRIES OF HUGO STINNES (1914—1918.)

The industrial activities of Stinnes during the war are connected with German enterprise in Belgium. It is a matter of history that for quite a number of years Belgium was an occupied territory and as a consequence the Belgium industries were by "right of conquest" transferred to German hands. The *Deutsch-Luxemburg* is one of the many mining, iron, steel and other companies which in 1914 got control over Belgium through German law. Stinnes, as founder and director of this association, came thus to play a great part in the exploitation of Belgian concerns.

Belgium was, however, a temporary proposition. The transportation and marketing of his goods arrested Stinnes' attention as a more permanent item in his concerns. In 1917 was founded the company for *See-Schiffahrt und Ueberseehandel* (ocean-navigation and oversea trade). In 1918 he also purchased shares in the navigation company of which Woermann is the founder and part-proprietor as well as in the German East Africa Line. The Hamburg-America and the North-German Lloyd, the two most famous navigation companies of Germany, also came to be connected with Stinnes. The same year the German-American Petroleum Company of Hamburg was brought within the sphere of his finance.

Associated with shipping lines and oversea trade are the hotels in ports. So Stinnes bought hotels in Hamburg the greatest emporium of Germany for foreign commerce.

In other ports he was equally active. At Koenigsberg on the east and at Bremerhaven on the west he established commercial houses or brought them under his control. The command over the navigation on the Baltic Sea was assured by his purchase of the *Ostseereederei* (Eastern Sea Shipping Co.), located at Flensburg close to the border of Denmark. Orders for eleven new ships were placed with several German ship-building houses at the same time so that his navigation enterprise might become self-sufficient and independent.

The undertakings of the war period comprise also the purchase of vast and rich forests in Eastern Germany. These were intended to be the source of wood necessary for his mining works, as has been indicated above.

By the time the war came to an end and the republic was established in Germany (November 1918) the Stinnes concerns had also secured a great part of the "brown coal" industry of the Rhineland. Stinnes was already a synonym for vertical as well as horizontal concentration in German social psychology, as one can gather from Dr. Brinckmeyer's brochure entitled *Hugo Stinnes*¹ (Munich, 1921.)

RHEINELBE-UNION (1920.)

The territorial losses of Germany through the Treaty of Versailles have dealt a severe blow to the Stinnes concern, especially, the *Deutsch-Luxemburgische*. Sixty per cent. of the coal and pig iron supplied by this mining and foundry company in 1913 used to come from the works in Luxemburg and Lorraine, which in 1918 were lost to Germany. Stinnes had enough capital at his disposal, but instead of establishing new concerns in order to

¹ From the French standpoint the story may be read in Gaston Raphael's *Le Roide la Ruhr : Hugo Stinnes* (Paris, 1928). To compare the French situation in iron and steel during the war see Pinot's *Le comite des Forges en France*. (Paris, 1919.)

replace the old he began buying up a number of works existing in Westphalia in order to serve as market for his self-manufactured goods. Factories for the production of steel, roller, chain, rivet, etc., were in this manner assured as integral limbs of the *Deutsch-Luxemburg*.

Adversity makes strange bed-fellows. Another great Westphalian mining and foundry company, the *Gelsenkirchener Bergwerks A. G.* of Gelsenkirchen, which employed 55,000 workmen and furnished 10,000,000 tons of coal in 1913, and through fusion with other works commanded the production of furnace, steel and wire was equally hit by the peace-settlement. It was compelled to confine its activity solely to mining. Emil Kirdorf, the founder and director of this concern, who had for about a whole generation, proudly resisted the overtures at amalgamation from all quarters, at last considered it paying to enter into an *Interessen-gemeinschaft* (community of interest) with the *Deutsch-Luxemburg*. The grand trust thus formed in 1920 is known as *Rheinelbe-Union A.G.* and is to last until the year 2000.

The amalgamation was an economic necessity for both Kirdorf and Stinnes as each wanted the other to supplement him.

Kirdorf is strong in coal and Stinnes is strong in smelting furnaces and other manufactures. So the amalgamation has been mutually helpful and has served to build out of them a tower of strength.

VERTICAL AND HORIZONTAL TRUSTS

The *Rheinelbe-Union A.G.* is a trust of "vertical" character, to employ a common technical term. Its scale of production comprises coal, ore and limestone as "raw stuff," and iron and steel as "intermediates." On the higher rungs of the ladder of manufacture wrought iron, plate, rolled wire and tube belong to the stage of

"half products," while machine-tools, screws, rivets, springs, ribs, knobs, studs, railway materials, automobiles, carriages, boats, etc., constitute the class of "finished goods."

Stinnes has since sought further expansion or heightening in the same line. This has led to the amalgamation of the *Rheinische Union* with a steel-manufacturing company as well as the *Bochumer Verein für Bergbau und Gussstahl fabrication*. This latter *Verein* or association, located at Bochum, is itself a great vertical trust commanding labour to the extent of 18,000 and drawing raw materials from its own mines, coke-ovens, quartz and limestone fields. As its manufactures comprise furnace, steel-melting, foundry, roller, forge, railway material and allied goods the fusion with *Bochumer* has served to eliminate competition and strengthen Stinnes in the uppermost stage, namely, in the delivery of "finished goods." A "horizontal" trustification has been effected by the amalgamation of the *Rheinische Union* with the *Bochumer* in so far as each instead of militating against the other is co-operating with it on "parallel" lines of production in almost every market.

Another great event of 1920 for the Stinnes concern is its amalgamation with the electrical works known as the *Siemens-Schuckert Werke* of Berlin. Up till now the "Stinnes complex" although comprising electricity (through the *Rheinisch-westfälische*), constituted specially a pyramid of coal and ores at the base and iron and steel products all along the line up to the vertex. But from coal and ores as bases the *Siemens-Schuckert Co.* had grown up in more than two generations along the electrical line into one of the most powerful "vertical" combinations of industrial Germany. As the electrical

¹ Sec, *Werner Siemens* by Professor Matschoss (Berlin, Verein *Deutscher Ingenieure*, 1916-17).

products supplement iron and steel one was incomplete without the other. The fusion of the two, the electrical and the coal-iron pyramids, has produced a gigantic "horizontal" trust perhaps unparalleled in the history of manufacturing organization. The huge structure commanding as it does 200,000 working men is known as *Siemens-Rheinische Schuckert-Union*. In order to fortify his position still further along the electrical line Stinnes has established relations with copper, brass and aluminium works.

THE LOGIC OF TRUSTIFICATION

The economics of trustification is at bottom identical with that of "production on a large scale" carried to its furthest logical consequences.

In the first place, the founding of a trust is almost a "technical necessity." Take the single problem of energy or power that operates the modern industries. Anthracite is not unlimited in supply. Inferior coal such as ignit, "brown" or "soft" coal has to be used. The question arises as to how to transform these inferior materials into better class fuels. Then remain electricity, oil and alcohol as sources of power. To what extent are they economically worth while? Next, the entire series of chemical processes involved in every industry is daily giving rise to inventions and discoveries and with them a whole set of problems. Altogether the industrial leader is every day face to face with the problem of "industrial research." The utilization of "waste products" forces itself upon the notice. None but a large concern,—and a trust is nothing but a large concern carried to the *n*th term,—can afford to study and master these problems.

In the second place, a trust comes into being almost automatically owing to "organizational" grounds. It is not enough that the goods be produced in the most up-to-date and efficient manner. They have to be delivered also

as cheap as possible. The costs of production must, therefore, be reduced to minimum. This can be assured by manufacturers only when, first, the entire "scale" of production from raw material to finished goods can be smoothly commanded by one brain or one organization, and secondly, when the horizontal competition between firms producing the same "class" of goods is eliminated by the establishment of a community of interests. In other words, the possibilities of cheap goods lie with an "empire of industries," so to speak, an economic complex in which each member co-operates with the others at the dictate of one omnipotent will.

Industrial evolution¹ is thus running parallel to the social evolution of mankind in other lines. Trustification is nothing but contemporary imperialism embodied in the economic sphere,—a system of monopolies, pools and corners, which, humanly speaking, although not without its advantages, compels none the less the men and women within its jurisdiction to face a state of repression, passive obedience and helpless submission to the pious wishes and benevolence of the magnates and powers that be. The danger has already been envisaged by Germany, "socialistic" as the country is in its legislation. And a "cartel law" is on the anvil with the object of protecting the people and safeguarding social welfare from cartels and trusts. Curiously enough, Hugo Stinnes is himself one of the promoters of the projected legislation.

¹ The stages in this evolution can be conveniently followed in W. Wygodzinski's *Wandlungen der deutschen Volkswirtschaft im 19. Ihr hundert* (Cologne, 1907). See also R. Haepke's *Wirtschafts geschichte* (Leipzig, 1922).

CHAPTER VIII

DENMARK'S EXAMPLE IN LAND REFORM

THE land-legislation of Denmark in "recent" years has been directed to the amelioration of the condition of two classes of rural population. These are, first, the *Husmaend* or petty land-holders, owning not more than ten or twelve bighas, and, secondly, the landless agricultural labourers

CREDIT TO SMALL OWNERS

The chief problem of the *Husmaend* consisted in the difficulty of getting credit because the value of their holdings was considered to be too low. In 1880 the government came to their help and founded two credit associations or banks in two different parts of the country.

These banks, as one can understand from Faber's *Co-operation in Danish Agriculture* (1918), were established with the sole object of granting loans to the small land-owners. Since then the *Husmaend* have been obtaining credit on the mortgage of their lands. The State guarantees the interest to the banks on behalf of the peasants, and the peasants functioning, as they do, through a co-operative association, are enabled to get credit on slightly cheaper than the open market rates. In founding these credit associations the Danish government was influenced by the principle of the German *Landschaft* or Land-credit-union.

CREATION OF NEW OWNERS

Subsequently a law was passed in 1899 in order to create new small owners of the *Husmaend* type. They were furnished by the government with loans to the extent of nine-tenths of the total cost of the holding. The terms of repayment were easy,—(1) only interest and that at the rate of 3 per cent for the first 5 years, and

(2) subsequently an additional 1 per cent to be made to the sinking fund.

By 1911 the new properties thus called into existence were 5777 in number each with an average area of about 31 or 32 bighas. Towards the beginning of 1923 the number rose to 9,960. It should be noted that Denmark is in population not larger than any three average districts of India, for the number of inhabitants is roughly about 30 lakhs.

These new estates are freehold and are to become the absolute property of the holders as soon as the loan is paid off. It is through such facilities that thousands of lacklanders have been able to grow into proprietors.

The history of these "proprietary" movements is described in detail in Westergaard's *Economic Developments in Denmark* (1922.) A further stage in the evolution along the same lines has embodied itself in the laws of 1919.

EXPROPRIATION WITH INDEMNITY

As it was not easy to get lands for sale the state found it necessary to devise measures for expropriation. The parochial land or "glebe" was one kind of estates to be requisitioned. About 2000 fresh holdings can be created out of the lands rendered thus available at the rate of about 44 bighas per holding.

In order to render lands available for new holders the state has also proceeded to break the *Fideikommiss* i.e., entailed estates, family trusts, or fiefs.

About 4,000 small holdings can be created out of the lands thus enfranchised. The Danish government considers the area of 44 to 45 bighas sufficient for a family-farm.

In each instance, of course, the old proprietors have been indemnified although not as satisfactorily as they

would like. And the new settlers on "glebe" or enfranchised "entail" are accorded more or less the same terms as the small holders by the law of 1899. By the end of 1922 there were 1186 new holdings of these two classes created on the laws of 1919. The "nationalizations" of land, be it noted incidentally, have not been accomplished without much protest on the part of the "vested interests."

THE MACHINERY OF LAND-NATIONALIZATION

Some of the details involved in the actual redistribution are interesting. First, in Denmark as in Germany, certain government-recognized public bodies, called "Public Utility Companies," were set up to buy out the big Zamindaris and carve them up into smaller farms.

Secondly, in certain instances the government appropriated 20 per cent of the value realized by the sale of the estates. About 5,000,000 is said to have been collected in the *Fideikomis* transactions. This money has been used, however, partly to indemnify the original proprietors, partly for loans to the new small holders, and partly to buy out other Zamindaris in order to create fresh small holdings.

Thirdly, the new owners are required to observe certain rules in regard to cultivation, sale, etc. Neither sub-division nor amalgamation or addition is allowed. The inheritance must be single and undivided. The farmer is not allowed to let any portion of the land nor build on it houses to let. At every stage the small holder has to feel that the land belongs ultimately to the nation or the state.

THE SIGNIFICANCE OF DANISH LAND-LAWS

The entire legislation, is certainly very extraordinary in its social and economic aspects bearing, as it does, a distant family likeness to the Bolshevik experiments in

Soviet Russia. The laws are to be found in French translation in the *Annuaire International de Legislation Agricole* for 1919 (International Institute of Agriculture, Rome, 1920.) It is those Danish land-reforms which have served the British economists like Ashley with precedents to go by in their schemes of small holdings. The significance of Denmark in contemporary rural reform is quite apparent.

CHAPTER IX

A NEW INDIA IN AGRICULTURE

IN our investigations into the economic transformation of India we are so accustomed to watching exclusively the stages in industrialization, that hardly any body is conscious that, slowly but steadily, a new India has been growing up under our very eyes in the domain of agriculture. The crops that our cultivators produce to-day, although the same in name and superficial appearance as those to which our forefathers were used, are not really identical with them. New varieties and improved breeds have been taking the place of the traditional strains. Indian cultivation is tending to be more and more reformed and rejuvenated.

NEW VARIETIES OF JUTE, COTTON AND TOBACCO

In 1920-21 Bengal, which possesses the monopoly in jute cultivation, had $4\frac{1}{2}$ million bighas under this crop. Of this area 18,000 bighas were sown with new varieties in Dacca Division alone. But the cultivators of Dacca wanted improved seeds for 120,000 bighas. The supply of seeds for the new strains was not enough, however, to meet this extensive demand.

Then take cotton, another textile crop. In the Punjab 1,560,000 bighas were sown with American seeds in 1920-21. The Punjab cultivator is making experiments

with another variety known as "285 F" which is expected to be economically more worth while than the one known as "4F" to which he has been getting used in recent years, although this latter itself yields Rs. 10 per bigha more than the traditional types. There were 63,000 bighas of the Bombay Presidency growing improved cotton. The area of the Central Provinces under new varieties was 1,080,000 bighas. There was an increase of 180,000 bighas over the figure of 1919-20.

Altogether Indian agriculture is tending to develop a new produce with a longer staple and better values for spinning and weaving. As the total area under cotton was 63 million bighas it is to be noted, however, that not more than three cultivators in a hundred were employing the improved strains.

Tobacco cultivators likewise have been showing interest in improved types. In 1920-21, 150,000 bighas were sown with "Pusa 28." Certain Sumatra varieties are also getting popular.

IMPROVED WHEAT

The renovation of Indian wheat has been proceeding apace. The Central Provinces had 2,400,000 bighas under new seeds. In the Punjab the improved varieties accounted for 1,965,000 bighas. The number of bighas sown with one or other specimen of the new strains was estimated at 1,200,000. The improvements have thus touched altogether 5,565,000 bighas. Every six cultivators in one hundred would appear to have been using the new breeds since the total area under wheat was about 77 million bighas.

The new varieties are named after the researches made on them at different centres. Among them "Pusa 4" and "Pusa 12" have been making conquests in different provinces of India. "Punjab 8" and "Punjab 42"

have been well distributed in the province of their original investigation.

The varieties of wheat that have been up till now use in India give inferior qualities of grain and weaker straws. They yield also smaller quantities. American wheat, therefore, easily defeats the traditional Indian produce on the world market. For instance, in London for every six maunds the best Indian wheat ("choice white Karachi," as it is called) to-day fetches one shilling less than Canadian wheat. But when the quality of Indian wheat improves on a larger scale, and *provided there be trade organizations in India to look after the interests of the Indian producer*, American, Australian and Russian farmers will begin to feel the competition from the Indian side in an appreciable degree. The same may be expected on the cotton markets of the world.

RICE RENOVATED

In 1920-21 there were about 234 million bighas of land in India under rice cultivation. Of this area 642,000 bighas produced improved varieties. In other words, nearly three in every thousand bighas were sown with new seeds.

Burma used the largest amount of the new seeds, the cultivators having sown 255,000 bighas with these varieties. Next came the Central Provinces with 231,000 bighas. In Bengal improved rice came from 138,000 bighas, while Madras accounted for 18,000 bighas.

The new varieties are driving the old out sheerly because of their greater economic worth. It is said that the improved seeds in Bengal yield 1 to 2 maunds more per bigha than the traditional ones. The new Burma varieties produce $1\frac{1}{2}$ to 2 maunds more than those to which the cultivator had been used all the time. In Madras the best specimen of the new variety is yielding about $15\frac{1}{2}$

maunds per bigha, and the cultivator is said to be making a net profit of Rs. 80 per bigha.

BETTER SUGARCANES

Cultivators have been getting used to improved strains for sugar-cane also. In the Central Provinces an improved variety is said to yield 17 maunds of rough sugar per bigha more than the traditional cases. Coimbatore, in Madras, it may not be unknown, is the experimental breeding station for cane.

The United Provinces contain about $4\frac{1}{2}$ million bighas of land under sugar-cane i.e. nearly 50 per cent of the entire area in British India for sugar. The cultivators are beginning to appreciate the new breeds and improvement in the cane may be expected to be steadily taking place.

There were 1921-22 about 10,500 bighas of sugar-cane in South Kanara of which no less than 90 per cent were Red Mauritius and Barbadoes. Since 1909-10 the area has been doubled and in ten years the old varieties of canes have been practically displaced. Of late a few ryots have been making trials on Fiji and Java Hebbal seedings and are said to be favourably impressed.

The rate at which agriculture is being renovated, so far as the existing crops are concerned, may be taken for what it is worth. But one should suspect that in India to-day perhaps new industries are not being introduced much quicker and that the old ones are not revitalized and modernised on a more appreciable scale. In any case the facts of *renaissance* in agriculture must not be ignored by the publicists and students of economic development.

CHAPTER X

THE CULTIVATORS OF FRANCE AND ITALY

PEASANT PROPRIETORS

PEASANT proprietorship is the principal characteristic of landholdings in France. The peasant is himself the proprietor and does not have to look up to a landlord.

TENANT FARMERS

Another system of tenure is that of tenant farmers. There is a landlord who lets the land out to tenants farming it independently. A substantial portion of the soil is farmed on this plan. The tenant does not employ labourers, nor does the landlord contribute to the expenses of the tenant.

METAYERS OR PRODUCE-SHARING TENANTS

Then there is the *Metayer* system. The land belongs to the landlord and is cultivated by the peasant. The former contributes part of the capital and gets about half the produce from the cultivator. This peasant-tenancy is a survival of medieval times and holds its own in some of the districts of the centre and the south.

AGRICULTURAL LABOURERS

There is a class of agricultural labourers in France and they are organized in agricultural unions. But most of them are themselves tenants or owners of small pieces of land."¹

Altogether, one can describe France as the country of millions of peasant landholders, where the cultivators are socially akin to the working rather than to the employing class.

¹ De Saint-Genis' *La Propriete rurale en France* (Paris 1902); De Rocquigny's *Les Syndicates agricoles et leur oeuvre* (Paris 1900); Saint-Leon's *Syndicalisme Ouvrier et Syndicalisme agricole* (1920)

THE SITUATION IN ITALY

In 1892 on the basis of 1—175 bighe as constituting a "small holding", 93 per cent of all holdings could be described as small holdings in France, only 7 per cent remaining in the hands of large proprietors. The situation in Italy is not so favourable. As a writer observes in the *Italian' Mail* (Florence), there are nearly 4 million owners of land and buildings in all Italy. That is, less than 9 or 10 per cent. of the population is in a position to enjoy that "magic of property" which "turns sand into gold."

LEASEHOLD (EMPHYTEUSIS) OWNERS

In various parts of Italy the lessee holds the lands of the state almost as owner. He pays rent in kind or in money to the government. Very often he may be called a life-renter. But should he be in a position to pay down in one capital sum the entire quit rent, he is a peasant proprietor. Generically the leasehold owners are described as *emphyteusis* tenants. This system of holdings does not create the landlord as a class. The cultivating owners themselves possess capital and training.

MEZZADRIA (HALF-PRODUCE SHARING) TENANTS

Corresponding to the *metayers* of France there is a class of tenants in Italy who hold their grounds of a landlord, cultivate them at their own risk and pay half of the produce to the latter. Such holdings, known as *mezzadria*, are frequent in Tuscany.

The property belongs to the landlord. He furnishes and repairs the buildings on the farm as well as provides the tenant with live-stock. The tenant may be evicted for negligence in cultivation.

On the whole the system is said to work well. The tenant feels strong since he is really provided with a

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substantial amount of "fixed capital" by the landlord. The grounds also are generally large and extensive enough for varied produce, such as olives, vines, fruit trees, grain as well as pasturage. The risk of bad harvests is thereby reduced.

LATIFONDI (ZAMINDARI) CULTIVATORS

The third system of Italian holdings is known as the *latifondi*. The proprietors of *latifondi* may be compared to the *Zamindars* of Bengal and *Talukdars* of the United Provinces. The *latifondi*, usual as they are in Central and Southern Italy as well as Sicily, consist of large tracts of land belonging to one owner who lets portions out to one or more middle-men at a fixed price. The lands are cultivated by peasants in return for a part of the produce or its equivalent in money.

The number of middlemen between the proprietor and the cultivator is often very large. This sub-letting gives rise to many abuses in the *latifondi* system. Besides, the peasants get a share only when the harvest is successful and can hardly get relieved of the money-lender's grasp in bad seasons. The system has been prevalent since ancient Roman times and is the source of perpetual hardships ¹.

1 From the Memorandum furnished by the British Ambassador at Rome in *Agricultural Tribunal of Investigation* (London 1924). See also Paglia's *La Mezzadria nell economia agraria* (Bologna 1921) and Ruffa della Scaletta's *Il latifondi siciliano* (Messina, 1921). The transformation of the *latifondi* system as well as other problems bearing on "internal colonization" are described in the year-book, *L' Italia Economica* (by Bachi). Occhini's *Lacrisi agraria in Italia* (Florence 1921) will throw light on Indian problems.

CHAPTER XI

EARLIER STAGES IN MODERN BANKING

MODERNISM IN CREDIT

WHILE presenting his annual report for the year 1924 the Rt. Hon. McKenna, chairman of the Midland Bank, London, said in part as follows :—

“ The fact that over one-half of our resources continues to be employed in the shape of loans and advances indicates our endeavour to give liberal assistance to trade.”

The significance of a statement like this can hardly be understood in India to-day as our experiences in modern banking do not seem to have gone beyond the Kindergarten stage, so to say.

Another item which is equally inconceivable in India is the fact that the Midland operates altogether 2,200 branches in Great Britain and Ireland. The Barclays another of the “ big five” banks of London, possesses likewise 1,700 branches.

The story of some of these modernisms may be read in Robinson's *Credit Facilities in the United Kingdom*, (New York, 1923) or in Schulze Gaevernitz's *Englische Kreditpolitik* (Berlin, 1924) with special reference to post-war developments in foreign trade. In regard to the United States the volume entitled *The Modern Trust Company* (New York, 1924) by Kirkbride, Butler and others makes us familiar with the complicated and intricate machinery of banking institutions such as have been organized into a system by the Federal Reserve Act (1913-1919).

While these are no doubt stimulating records it is questionable if at the stage of economic development in

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which Indians find themselves to-day it is always safe for practical financiers to try to be quite up-to-date in the knowledge or profession of banking. Perhaps the story of the earlier phases in modern banking is likely to be more instructive to the Indian bank-builders and experts in finance than is that of the recent developments, overpowering as these latter are bound to be by the sheer fact of their vastness and organizational complexity.

Curiously enough the earlier stages of modernism in German banking happen to be very recent. In bank technique and organization as in other branches of modern economic life some of the youngest types were still in evidence between 1870 and 1895. The Indian economist need not go back to the days of the Florentine Medici in order to visualize the decay of feudal finance and register the birth of the modern world. The period of two decades and a half since the establishment of the German empire, by Bismarck, presents a valuable object-lesson to the races that have yet much ground to cover in the preparation for cosmic world-struggle.

THE " D " BANKS OF GERMANY

German finance today is controlled by four great " groups " of banks. The most-influential of these is the group associated with the *Deutsche Bank* of Berlin. The second in importance is the group of the *Discontogesellschaft* which also has its head office in Berlin. The *Dresdner Bank* of Dresden is third in the list, also commanding an equally powerful group of banking institutions. The fourth group is that clustering round the *Darmstaedter Bank* of Darmstadt. These are popularly known as the " D " Banks ¹ as the name of each begins with D.

¹ e. f. the ' big five ' Banks of London, Barclays, Lloyds, Midland, National-Provincial, Westminster.

What are these " groups of banks " or as they call it in Germany, the *Interessen-Gemeinschaften* (community of interests in the banking world) ? These constitute banking " trust " companies and represent the same movement towards concentration in the money market as the Stinnes industries, for instance, in the field of production.

And yet what was the financial position of the leading banks about the time of the Franco-Prussian war ? There were in those days private " personal " banks as well as joint-stock banks. The Rothschilds house of Frankfurt on the Maine, the Landenburgs of Mannheim, the Schultzes of Bremen, the Landau house of Berlin and Camphausens of Cologne were some of the famous bankers. The great joint-stock banks mentioned above were also then in existence but each one as a self-sufficient entity.

BANK CAPITAL

The total amount of share capital possessed by six such joint-stock banks in 1870-72 was valued at only 112,800,000 marks (1 mark to $3/4$ Rupee). It took about a quarter of a century before the capital could be substantially enlarged. In 1895 the total amount was raised to 413,000,000 marks, i. e. something above 30 crores of rupees. In other words just thirty years ago Germans were used to figures in banking accounts which today would not appear to be too bewildering in Indian estimation.

Let us take another aspect of bank capital. Banks receive deposits and pay interest on them. This deposit business is called " passive " banking in Germany. It is interesting to observe that almost until the end of the century the joint-stock banks of Germany did not do any mentionable business in the line of receiving deposits. That is to say, check accounts, depositing money in banks

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at certain rates of interest, paying stores, hotels and creditors with checks on banks, and such other items of "modern" life were hardly known among the German people about a couple of decades ago. It was in 1902 that business in interest-bearing deposits was first started by the Schaffhausenscher Bankverein of Rhenish Westphalia.

BRANCH OFFICES OF BANKS (1870-1895)

Another important item in contemporary banking is the branch offices established by great banks. To a very considerable extent the number of such branches depends on the extent and importance of "passive" banking. Previous to 1870 Frankfurt on the Main was the money-market of the Germanic States. But the establishment of the German-Empire raised Berlin from a Prussian, *provincial* city to the status of the metropolis of Germany. And so Berlin began to attract the banks of the provinces to itself.

In 1871 the Darmstaedter Bank converted its Berlin agency into a branch office. The Berlin branch of the Dresdner Bank was not opened before 1881. And it was not before 1891 that the Schaffhausenscher Bank, located as it was in the industrial districts of the Rhine-Ruhr, established its branch office at the German capital.

The sea-ports also attracted the banking institutions such as were in search of maritime business. The Deutsche Bank of Berlin opened its branch at Bremen in 1871 and at Hamburg in 1872. The Hamburg branch of the Dresdener Bank (Dresden) was not opened before 1892 and that of the Discontogesellschaft (Berlin) not before 1895.

How slow the rate of progress has been in Germany one can understand only when one compares figures from England and France. Taking the statistics from a somewhat later date, in 1908 there were 21 banks in England

each with more than 100 branches. The London City and Midland Bank had 447 branches in 1905. There were 683 branches in 1903 possessed altogether by the three great French Banks, viz. Credit Lyonnais, Comptoir National d'Escompts and the Societe Generale. The number rose to 1519 in 1912.

Then, again, in foreign countries there was only one representative of German Banking in the period from 1870—95. This was the London branch of the Deutsche Bank founded in 1870, the very year of its own establishment in Germany. It was not before 1900 that the Discontogesellschaft, and not before 1901 that the Dresdener Bank and the Darmstaedter Bank established Branches of their own in London.

RESOURCES OF GERMAN BANKS

These are initial, almost tentative, steps in modern banking. But the decade from 1895 to 1905 marks a veritable epoch in Germany's banking experience.

By 1905 for instance the six great banks had raised their capital by 500,000,000 marks. The total resources of these institutions figured at 1,167,000,000 marks. And this is just ten times the figure at 1870.

"Passive" banking, which in 1895 did not virtually exist, accounted for a business to the value of 912,000,000 marks in 1905.

The Deutsche Bank of Berlin alone held 341,000,000 marks in deposits,—a sum higher than its own capital.

CONCENTRATION IN GERMAN BANKING (1895—1905)

The period witnessed also the great strides in expansion and trustification which have transformed German banking enterprise into what it is to-day.

The amalgamations began with the endeavours of the Deutsche Bank. The movement began in 1897 when the

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Bergisch-Maerkische Bank of Elberfeld (Rhineland) on the West, the Schiësischer Bankverein of Breslau on the Southeast, and the Hannoversche Bank of Hanover in Central Prussia, came to have close associations with this great Berlin institution. By 1905 the range of *Interessengemeinschaft* was so extended as to enable the Deutsche Bank "group" to command capital resources to the value of 540,000,000 marks.

In the same manner by 1905 the Discontogesellschaft came to touch the entire commercial life of Germany by unions such as enabled her to command 493,000,000 marks. The Rheinische Discontogesellschaft fell within its orbit in 1902, the Barmer Bankverein, another institution of the Rhineland, in 1904, and the Allgemeine Deutsche Kreditanstalt of Leipzig (in Saxony), the Sueddeutssche Discontogesellschaft of Bavaria, as well as the Rothschild house of Frankfurt on the Maine in 1905.

Likewise did the Dresdner Bank in 1903, bound up as it is with the industries of Saxony, enter into a relation of "common interest" with the Schaffhausenscher Bankverein which played an outstanding role in the iron and steel industries of the Rhine-Ruhr. This group commanded about 1905 the capital of 431,000,000 marks.

The Darmstaedter Bank began its "fusion" operations in 1902 when it made an arrangement of intimate co-operation with the Breslau Discontobank having its field of operations in Silesia. The group, commanding as it did 202,000,000 marks was thus in a position to influence the finance not only of Southern and Western Germany as well as of Berlin as before but also of the South-east.

Altogether 52 different banks, each with an average capital of 75,000,000 marks, came to experience "fusion" of one sort or another. Since then the number of branches

"agencies," or "correspondences" of each bank in town and country has been ever on the increase.

BANKS AS FEEDERS OF INDUSTRY AND COMMERCE

During the same period the overseas activities of the German banks showed an unparalleled record. In 1901 there was only one London "branch" of each of the four "D" Banks. But in 1906 Germans possessed 13 banks in foreign countries together possessing 100,000,000 marks as share capital. And there were no less than 70 branches of German banks abroad, distributed all over Asia, Africa, and Central and South America.

German banking which was almost timid in its operations down to 1895 commenced at this date an abrupt career of expansion. The activity has expended, as is evident, geographically both inland and overseas. But the geographical expansion has in every instance been brought about by the urge to tap all sorts of industries and agricultural enterprises at home as well as promote commercial ventures abroad. The iron and steel industries of the Rhineland, the navigation and maritime trade on the Rhine, the phosphate manufactures of Hanover, the textile and food industries of Saxony, the farming interests of Southern Germany, the electrical industries of Berlin and environs,—each and one of the manifold wealth-producing factors of German life has since been consciously served by a bank or a group of banks.

The growth of the industries brought along with them the craving for markets and the demand for export facilities. In this commercial expansion of Germany the banks have been playing a well thought out and systematic plan since 1895. Every "group" of banks is an industrial as well as an export institution. The enterprises of banks contributed already in 1905 to the establishment of Germany as a world power in every sense,

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FRENCH BANKING ABOUT 1870

For France the lines of evolution in modern banking are almost identical. Speaking at the *Societe d'Economic Politique* in March, 1925 on the subject of *La Formation du Banquier* (The Training of the banker) M. Dufoureq-Lagelouse said: "Until 1848 French bankers were heads of private establishments. Banking was carried on in a personal manner either individually or in collaboration with one or two associates."

The establishment of the *Comptoir d'Escompte de Paris* in 1848 marked the beginnings of a new era. But it was not until the Third Republic was founded at the end of the Franco-Prussian War in 1870 that modernism in banking may be said to have struck its roots deep in French society.

In regard to branch offices of banks the situation at the end of 1871 is thus described by Normad in his *Societes de Credit et Banques a Succursales en France* (Paris, 1924); "There were no branches of the *Banque de France* or of any large private bank in 19 out of the 83 *departements* (districts) of France. Great banking centres were also rare,—places, for instance, where in addition to the *Banque de France*, other credit institutions were represented. Marseilles, Besancon, Nantes, Bar-le-Duc, Valenciennes and Lyons were the only six cities with a plurality of competing banks."

The developments during the last fifty years have been as rapid as in Germany.

In 1889 the *Comptoir d'Escompte* possessed only one central office at Paris, 3 agencies in the *mofussil*, and 8 agencies in the colonies or abroad. In 1924 the total branches numbered 226.

In 1912 the *Credit Lyonnais* was represented by 192 offices in France and 74 in colonies and foreign countries.

In 1923 there were 555 establishments bearing the same name.

The corresponding number for the *Societe Generale* was 636.

When one studies all these figures, with special reference to Indian conditions, one should suspect that in banking as in other aspects of economic and social (and perhaps also cultural) development India has yet to commence mastering the ideas of 1870 or thereabouts and traverse the ground covered by the moderns since then.¹ The question of India's being able to catch up to the rest of the world is for the present not one of practical politics. For, by the time India assimilates the achievements of the last fifty years the pioneers will have created another epoch in bank technique and credit organization.

On the subject of branches of banking institutions Normand furnishes very valuable historical data in regard to France in *Les societes de credit et Banques a Succursales en France* (Paris 1924). This, moreover, happens to be the only book available on French banks. The other treatises are out of print for the time being. Bachi's *L'Italia Economica*, (Citta di Castello) for 1922 brings the banking statistics of Italy down to 1921 and gives in detail the story of the failure of the *Banca Italiana di Sconto*.

¹ See Riesser's *Entwicklungsgeschichte der Deutschen Grossbanken* (Jena, 1905) Schumacher's *Die Ursachen und Wirkungen der Konzentration im deutschen Bankwesen* in *Schmoller's Jahrbuch* (Munich, 1906) and "Private Banking in Germany" in the *Political Science Quarterly* (New York, 1907); Helfferich's *Deutsche Bank* (Berlin, 1921). Banking development's in France may be studied in the works by Souchon (agricultural) and Thery (general). For Austria see Scheffer's *Bankwesen in Oesterreich* (Vienna, 1924). A comparison between the English and German methods of banking is to be found in Weber's *Depositenbanken und Spekulationsbanken* (Munich, 1922).

CHAPTER XII

GERMAN SCHOOLS OF COMMERCE

UNDER the auspices of the Prussian ministry of education a volume of essays has been compiled by A. Kuehne on the various professional schools of present-day Germany. The book has been published at Leipzig in 1923 under the title of *Handbuch fuer Berufs und Fachschulwesen*. Each chapter is the work of a specialist, whether as educator or as Administrator.

The commercial schools of Germany belong to three different and gradually rising grades.¹ The lowest grade is that formed by the *Handelsschule* (school of commerce). To the next higher grade belongs the *Hoehere Handelsschule* (higher school of commerce.) The *Handelshochschule* (college of commerce), which like the *Technische Hochschule*, enjoys the academic and social status of a University, represents the highest type of educational institutions in the commercial line.

LOWER SCHOOLS

Both boys and girls are admitted in the *Handelschule*. Nobody is admitted without the certificate of the compulsory-elementary-school-final. That is, the students as a rule are not younger than 14. The curriculum is finished in two years.

The scholars are bound to attend the school for about 30-34 hours per week. The following subjects are studied :—(1) commercial science and business correspondence, (2) accounting, (3) book-keeping, (4) civics, economics, politics, (5) German, (6) economic geography, (7) copying, type-writing, shorthand, (8) French or English. In addition to these intellectual subjects there

¹ To understand these schools in the proper commercial perspective see T. Plaut's *Deutsche Handelspolitik* (Leipzig, 1924.)

are gymnastics and physical exercises for which the school is by law compelled to reserve 2 hours per week.

In 1919 there were 70 elementary schools of commerce. Among the students the boys were 2100 in number and the girls, 6,900. The teaching was imparted by 185 persons in superior position and 430 on the lower staff.

HIGHER SCHOOLS

Like the lower schools, in the higher schools of commerce also are open to both sexes. In order to get admitted one must possess the certificate of what may conveniently be described as the secondary-school-final (*Realschule* or *Gymnasium*) for boys and *Lyzeum* for girls. At this stage the students are generally 18 years old and possess qualifications almost of the Indian B. A. or B. Sc. standing. The schools carry a 2 year course. The subjects of instruction are identical with those in the power institutions. The treatment is of a higher standard.

In 1919 the number of the higher schools was reckoned at 35. There were 600 boys and 1300 girls getting instruction. The teaching staff was composed of 70 superior and 80 lower officials. The schools sat on the average for 32 hours per week.

DISTINCTIONS IN LIFE AND LEARNING

The students who pass out of these institutions are expected to take a leading part in commercial life not only in responsible position as employees but also in an independent capacity. The lower schools however are intended primarily to train efficient office-clerks for commercial houses. Students with the *Hoehere Handelsschule* certificate are admitted without examination in the *Handelshochschule* (college of commerce).

Lying between the lower and the higher schools of commerce in academic and social standing there is a class

of schools which may be mentioned in this connection. These are called *Handelsrealschulen* (commercial *Realschulen*.)

The *Handelsrealschule* may conveniently be described as a secondary school of the *Realschule* type (differing as it does from the *Gymnasium* only in the emphasis on mathematical, scientific and modern language subjects), but provided with special compulsory commercial courses. Students, who generally at 18 pass out of a *Handelsrealschule*, may be taken to be Indian B. Sc's (in commerce).

COMMERCIAL CLASSES IN SECONDARY SCHOOLS

These *Handelsrealschulen* are not really schools of commerce and are not intended to build up commercial people. Their sole function in this direction is to create a taste for commerce and provide scholars with a preparatory equipment.

In 1921 Saxony alone possessed 11 such secondary schools with commercial classes. There were 2023 scholars. 70 per cent of these students came from families representing (1) middle class ministerial officers and clerks, (2) employees in commercial bureaux, (3) independent commercial people and (4) independent industrialists.

The *Handelsrealschule* in Leipzig, Saxony's trade-centre, carries a 33 hour schooling per week. The subjects are as follows : (1) religion, (2) German, (3) English, with business correspondence, (4) French, with business correspondence, (5) mathematics, (6) accounting, (7) physics, (8) chemistry, (9) biology, (10) technology and the study of raw materials, (11) commercial and economic geography, (12) commercial history, (13) science of business (comprising exchange, book-keeping etc.) (14) economics, (15) handwriting (16) shorthand, (17) gymnastics

and physical exercises, (18) drawing, (19) singing, (20) one of Spanish, Italian and Russian.

In 1921 the students for the final examination were asked to write in German an essay on the following subject:—"The ideas of Ibsen and Tolstoy on social re-organisation. "Time allowed 4 hours. Neither Ibsen nor Tolstoy is a German. One should guess from this question the standard of general culture that is sought to be promoted in the secondary schools of Germany. Ibsen and Tolstoy are of course studied in German translations.

Down to 1922 there were 56 *Realschulen* in Bavaria, many of them with more or less similar commercial classes as in Saxony. The statistics for all Germany (excluding Saxony but including Bavaria) for the year 1920-21 indicate 46 *Handelsrealschulen* in which 3059 students were enrolled in the commercial classes.¹

CHAPTER XIII

ITALY'S WAR-BUDGET AGAINST MALARIA

ITALY is like Greece one of the most malarial countries in Europe. The marsh-lands, bogs and fens, as well as lagoons, those inevitable breeding grounds for the mosquito are distributed over the whole country. The greatest areas of malarial infection, however, are found in the province of Venetia and in the provinces of the centre.

¹ In Plaut's *Deutsche Handels politik* (Leipzig 1924), we get a historical treatment of Germany's commercial policy including the bearings of the Dawes and McKenna Reports. The sections dealing with the developments from 1871, and especially from 1906 to 1914 are eminently interesting. Recent currency problems as well as the question of dumping have received adequate treatment. The treatise is valuable for a comprehensive grasp of the entire economic situation.

ITALY IN 1870

With the establishment of Italy as a united nation (1861-70) the Government undertook a survey of the entire country from an economico-sanitary standpoint. About 50 years ago it was ascertained that more than one-third of the country was the hot-bed of malaria. Italy is a land 214 million bighas in extent. To be precise, 75 million bighas were infested by malarial fever. Of this area one-fifth, i. e. 15 million bighas were so rotten that hardly a human being could exist. And agricultural production was virtually nil.

THE CAMPAIGN AGAINST MALARIA

The problem of fighting malaria has therefore been a national question with the Italian people for the last fifty years or so. The *Federazione delle Bonifiche* of Rome has published a report of the work done in this direction. Some valuable data are found in an issue of the *European Commercial* (Vienna), Professor Grassi of the University of Rome is a medical authority in this field and is master of experience such as might be useful in the Indian campaign against malaria.

405,000 BIGHAS IN FERRARA

One of the most marvellous feats of engineering consists in the redemption of lands in the district of Ferrara near the Adriatic coast. The malarial area comprises here 405,000 bighas. The lands are low-lying and there is no natural drainage. About 1880 the territory was almost uninhabited and uncultivated.

PUMPING STATIONS AT GODIGORO

An Italian Company was established in 1897 in order to redeem these lands. The *modus operandi* consisted in nothing but pumping. Two pumping stations were built at Codigoro, one to deal with the high waters and the other with the low.

The high-water station is installed with 8 centrifugal pumps (Gwynne pattern). These possess a maximum capacity of 30 cubic meters of water per second. There are 5 turbines (Sulzer pattern) in the low-water pumping station. Their maximum capacity reaches 44 cubic meters per second.

EXTENT OF ENGINEERING WORKS

The engineering involved in these land-reclamation works has assumed enormous proportions. In order to redeem the area, covering as it does slightly about 4 lakhs of bighas, it has been necessary to construct canals and ditches whose total length measures 325 miles. In addition there are about 40 miles of Decauville railway. The extent of roads can also be measured by hundreds of miles. Bridges, walls and docks are numerous.

THE PROBLEM OF AGRO ROMANO

The neighbourhood of Rome has been notorious as the breeding-ground of malaria since the earliest times. The area covers no less than, 500,000 bighas, i.e., almost four times the territory in Ferrara. The historic Pontic Marshes belong to this region known, as it is, as Agro Romano. The reclamation has been going on in these lands. The marshes and shallow lakes are being drained and the "tropical jungles" cleared. The operations, although already crowned with considerable success, have touched but a fringe of the vast area.

REDEMPTION ACCOMPLISHED

Of the 75 million malarial bighas the government has ear-marked about 13½ millions to be attacked by the malaria-engineers for reclamation (bonifiche). Up till now the redemption activities have embraced nearly 5½ million bighas, as may be read in the publication of the Italian ministry of the interior entitled *La Malaria in Italia ed i risultati della lotta antimalarica* (1924).

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The geographical distribution of these redeemed lands is as follows :

Northern Italy	...	3 million bighas.
Central Italy	...	4 lakh ,,
Southern Italy	...	2 million ,,
Islands	...	2 lakh ,,

PARTIAL EXTIRPATION OF MALARIA

Altogether it is only about 1/15th of the infected area that has yet been redeemed. The results, however, have not been slow to make themselves felt.

First, let us take the statistics of mortality from malaria. In 1887 there were about 21,000 deaths in Italy from this single source. The number sank to about 18,000 in 1891. In 1900 it was about 16,000. During 1901-1908 the annual average of deaths from malarial fever was numbered at about 8,000 only. This was the period, be it noted, of the most intensive activity in the anti-malaria campaign. The meaning of redemption accomplished by malaria-engineers is clear.

THE MEANING OF REDEMPTION (BONIFICA)

The partial extirpation of malaria as registered in the gradual decline in the number of deaths from this cause is but one aspect of the reclamation of lands. Italian economics also owe a great deal to the achievements of malaria-engineering.

To take only one region, Northern Italy with its 3 million bighas of redeemed lands. As a result of the campaign the population of the area has increased by 65 per cent. This implies so much accession to Italy's labour power as well as economic and social might. There has been an increase of cattle population also and this to the extent of 125 per cent. From about 80,000 the live-stock has risen to 185,000 head.

Nor has the agricultural production failed to feel that impulse. The value of the crops raised in this region of reclaimed lands has risen about eight fold,—from 138 million to 1,048 million lire (1 lire=10 annas). The figures are normal i.e. pre-war phenomena and do not come down to the “inflation” prices.

NEW COMMUNES

In the district of Ferrara an intirely new and smiling countryside has come into being. With the redemption of lands peasants began to flock on to the area. Cultivation commenced and houses sprang up with marvellous rapidity. In 1910 a new commune or town was founded where twenty years before there were nothing but barren marshes. It has been christened Jolanda di Savoia.

In the same manner the Agro Romano has been able to establish healthy agricultural colonies. One is called the Colonia Elenia after the present queen.

FINANCING THE CAMPAIGN

The war on malaria is an expensive job. Engineering works cost money. The total expenses for the 4 lakhs of bighas in Ferrara have come up to 17,500,000 lire (Rs. 109½ lakh). In other words the sum of nearly one crore and ten lakhs of rupees was needed to conquer malaria in this region. This comes to about Rs. 27 per bigha.

The annual budget on redemption in pre-war years provided for 496,253 lire. We may call it about 12 annas per bigha.

It is not enough to instal the pumps and construct the canals. These have to be maintained in order and repaired from time to time in a regular manner. The campaign against malaria is thus an eternal enterprise for the people,—a part of the daily “national household”

expenditure. Public finance has to treat it as a permanent " first charge " on its assets and earnings.

PUMPING VS. DRAINAGE

Not all bogs and marshes are alike. They are very varied in nature and geographical situation. The technical methods of redeeming the lands are accordingly diverse. The cost per bigha differs therefore with the different lands.

The method adopted in Ferrara is a very expensive one. As a rule the Italians make use of other methods. Pumping is employed only in those regions to which the less expensive methods are not adopted.

One of these comparatively cheaper methods consists in the erection of drainage works. Drainage may be surface or underground. This method of redemption is adopted where the land has a sufficient fall and a suitable basin is near at hand to receive the water.

FLOODING

Another method which is being successfully employed in Italy and which is at the same time less expensive than pumping is flooding. It may be adopted, however, only under certain favourable topographical conditions.

First, the land to be reclaimed must lie slightly below the level of the basin into which it ought to drain. Secondly, a river has to be near at hand. And the waters of the river must contain a sufficient amount of sediment.

Under these circumstances the engineers may consider it advisable to erect embankments in order to enclose the lands. The waters of the river may be let in within the enclosed fields at regular intervals. The flooding can be maintained until enough sediment has been deposited. The waters of the river have finally to be drained out.

But although slow, flooding is an economically very convenient method. It may be described almost as paying its way. The land begins to acquire an extraordinary fertility. Besides, while the process is going on, cultivation does not have to stop. Rice, for instance, which needs plenty of water, may continue to be grown. The redemption period thus does not entail losses or wastes but is on the contrary completely reproductive.

Methods allied to flooding are in use for lands situated near the sea. The ebb and flow of the tide are taken advantage of in order to redeem the soils and raise their elevation.

ENGINEERS THE HEROES OF SANITATION

It would appear, therefore, that the problem of combating malaria is not so much a problem of pure medical science as of mechanical and civil engineering. It is not the kavirajes, hakims and doctors, but the engineers who as a rule are quite innocent of medicine and surgery, that have been functioning in Italy as the saviours of the people. Sanitation on a country wide scale is more an "industrial" and "technical" than a "sanitary" or "hygienic" proposition. The real heroes of sanitation and the architects of national health are the industrial experts and engineers such as are employed in the domain of "applied geography" in order to construct a new physiognomy out of the lands and waters given by Nature.

MALARIA BUDGET

Italy's experience is instructive from another standpoint. How have the expenses of this peculiar "war-budget," so to say, been met? The funds for campaign against malaria have come mostly from the government treasury. From 1866 to 1921 the state has spent 492 million lire (=Rs. 31 crores.) On the average this means about 56 lakhs of rupees per year.

The statement needs analysis. In Southern and Central Italy, as explained by the director-general of public sanitation in the publication, *La Malaria in Italia* the soil is in many cases sandy and barren. The redemption of lands can by no means render them fertile or productive in any way. So the proprietors have no personal interest in investing money in the reclamation of the regions. The entire work has to be undertaken by the government *solely for reasons of public health* without consideration of any returns to the treasury in the form of improved agriculture, enhanced rents or taxes. Often the whole work represents a dead loss or unrequited expenditure on the part of the state. It is out of the government's malaria budget that nearly 2½ million bighas have been redeemed in the centre and south of Italy.

PROPRIETOR'S SELF INTEREST

In Northern Italy, however the lands although marshy and malarial are fertile. And once they are redeemed they become the centres of flourishing peasant life, (*coltura razionale ed intensiva*, rational and intensive cultivation). The proprietors, the Zamindars, have therefore considered it to be their self-interest to invest money in the reclamation of these lands.

And yet the Zamindars contribute, as a rule, not more than 30 per cent. of the expenses. The state, i.e., the central government contributes 50 per cent. the government of the province contributes 10 per cent. and the remaining 10 per cent. is contributed by the communes i.e., districts and village jurisdictions.

A PAYING CONCERN

Altogether the money spent by the landed proprietors or by the government has not been spent in vain. It has not been philanthropy, patriotism or "social service"

pure and simple. The thing has come out nicely as a sound business proposition.

In Northern Italy, for instance, the state has spent throughout altogether Rs. 21 per bigha. The redeemed land now pays *annually* in taxes, duties etc. Rs. 16 per bigha, in other words the state is at present earning an interest of about 75 per cent. on the capital invested. The campaign against malaria has proved to be a paying concern. The losses in the southern districts have been made up in the long run.

AN ECONOMIC ENTERPRISE¹

When one considers these facts the conviction naturally grows that the problem of malaria, if it is to be attacked seriously, should be approached fundamentally as an economic enterprise. It is only when proprietors with long views determine to improve their estates and earning capacity and are willing to consider it worth while to spend money in the hope of future returns that "geographical engineers" can be provided with ways and means in effecting the sanitary renaissance of the country. And naturally the governments, both central and local, as the biggest economic "agents", have to realize that these exploits of "applied geography" or achievements in topographical reconstruction mean ultimately not merely so many healthy, strong and active, men and women, the spiritual raw materials of the state, but also a substantial increase in the national revenues, those "sinews of war".

1 For other measures against malaria in addition to the *opere di bonifica* (reclamation works) see the report *La Malaria in Italia* (1924) published by the public health department of the ministry of the interior (Rome). The document is valuable enough in facts, ideas, charts and statistics to be rendered available in the Indian languages. See the chapter on *politica agraria* in *L'Italia economica nel 1921*, as well as Occhinis book *La crisi agraria in Italia* (Florence, 1921), for latifondi, malaria. redemption etc.

CHAPTER XIV

THE FRENCH SYSTEM OF AGRICULTURAL CREDIT

THERE are two sources from which the agriculturists of France can obtain loans, one private and the other state. Neither is more than three or four decades old, as one understands from Professor Souchon's *Le Credit agricole en France*.

THE DURAND RURAL BANKS

As everywhere else, in France also the private or people's credit institutions are "cooperative" enterprises and they owe their inspiration to the Raiffeisen principles. The system was introduced through the energetic propaganda carried on by M. Durand, a lawyer of Lyon. In 1900 M. de Rocquigny was able to report in his *Les Syndicats agricoles et leur oeuvre* (Agricultural Syndicates and their work) that in the course of less than ten years the number of *caisses rurales* (rural banks) was more than 400. These were then already organized into a federal union.

The Durand institutions, following Raiffeisen as they do, are limited to small areas. The members know one another's affairs intimately. The liabilities are unlimited for the individuals in regard to the debts of the associations.

These *caisses rurales* have been quite successful and have rendered great service to French agriculture. But government credit is by far the more important factor in French farming.

GOVERNMENT LOANS TEN CRORES (1921)

In Saint-Leon's *Syndicalisme ouvrier et Syndicalisme agricole* (Working-class and Agricultural Syndicalism), published in 1920, one notices that in 1913, the last pre-war year the state advanced 93,904,000 francs to the

peasants. This would be equivalent to about 5 crores and 87 lakhs of rupees.

At the end of 1921, the total public funds allotted to agricultural credit amounted to nearly 300 million francs, says Prof. Macgregor in *Agricultural Tribunal of Investigation* (London, 1924). During this period the rupee was worth, roughly speaking, 3 francs. In other words, during and since the war the state credit almost doubled itself (being about 10 crores of rupees).

STATE AND PEASANTS' UNION (SYNDICATES)

The state loans are administered through an institution known as *Credit Agricole*, established in 1894. The council of this establishment, official as it is, functions under the control of the ministry of agriculture. The loans are not obtained by individuals or societies direct of the government. The *credit* filters down to the persons or syndicates desiring it only through the Unions or federations of societies as members of "regional banks".

Credit is distributed for different purposes in proportions strictly defined by a law, in the present instance, the law of 1920. There are four directions in which the credit is available.

(1) SHORT PERIOD CREDIT

First comes short period credit such as can be enjoyed only by agricultural syndicates. These organizations first came into existence in 1884 under the protection of a law. By the Meline Act, passed in 1894, the same institutions were authorized to establish credit societies (*caisses*) and discharge the functions of banks,—exclusively for their own members, however. It was, again, only for the purchase of manures,—seeds machines and stock that the banking was permitted to these local syndicates.

REGIONAL BANKS

The resources of these *caisses locales* (local credit associations) are very limited for they are but annexes of the peasants' unions, the syndicates. So in 1899 an Act was passed authorizing the creation of larger credit institutions under the name of *caisses regionales* (regional or district banks). These are not entitled to have as members anybody outside of the group of the local agricultural credit societies created by the Act of 1894.

The regional banks are not, however, be it noted, government banks. They are private credit societies and constitute but a higher rung of the same system to which the local societies belong. But they are privileged to obtain loans from the government at very low rates for a period not exceeding five years. They are thus enabled to advance credit to the local societies at reduced rates.

MUTUALITY

In 1913 there were 98 "regional" banks in France. These were feeding 4533 "local" banks, in which altogether 236,860 peasants were interested through their "syndicates". Both these syndicates, the pivots and real atoms of the system, as well as the regional banks are based on "mutuality". The members in each instance know one another personally. None but members are to enjoy the privileges. The surpluses and other economic benefits are not to be distributed as dividends but go to consolidate the reserve fund. Each unit helps, the others,—within a prescribed territorial zone.

(2) INTERMEDIATE CREDIT

The second direction in which credit is available gives rise to what is called intermediate credit i.e., credit for comparatively long periods. Individuals or associations can get this loan for period not exceeding 10 years. It is

agreed that they devote this advance to livestock and equipment. Rural artisans, such as smiths and tanners, can also avail themselves of this credit provided they be members of a syndicate. The loans are administered as usual through the regional banks.

(3) LONG CREDIT FOR ASSOCIATIONS

Loans are available for long periods also. And for these purposes 65 per cent of the resources of the *Credit Agricole* are ear-marked. The credit can be enjoyed by (1) societies as well as (2) individuals.

Agricultural associations of all sorts, the co-operatives for purchase as well as for production, manufacturers of agricultural implements, and such other societies can obtain credit for a period not exceeding 25 years. The advances are not to exceed six times the paid-up capital of these associations. There were 750 societies enjoying a total credit of 57 millions (1 crore 90 lakhs) in 1921.

(4) LONG CREDIT FOR INDIVIDUALS

Individuals such as desire to be fixed up as "small holders" can likewise get credit to the extent of 40,000 francs for the maximum period of 25 years. For ex-service men military pensioners and civil victims of the war there are certain concessions in regard to the terms. But in any case the rate of interest is not more than 2 per cent. At the end of 1921 there were 8000 individual loans at an average of 6000 francs (Rs. 2000). 32½ per cent of the entire resources of the *credit* are available for these items, another 32½ per cent being reserved for associations, as indicated above.

THE AMOUNT OF NORMAL STATE SUBSIDY

It has to be remembered that, as Ashley suggests the post-war loans advanced by the state, are influenced by the considerations of reconstruction in devastated areas.

One should not therefore take the figures of 1921 as normal contributions of *Credit Agricole*. But taking the figures for 1913 as normal, one notices that the sum total of all the loans, administered as they were through the 98 regional banks, was 162, 298,000 francs. And of this amount 93,904,000 constituted, as we have noticed above the state subsidy. More than 58 per cent of the credit that came to the assistance of the French cultivators was thus furnished by the government. (*Agricultural Tribunal of Investigation*).

ETATISME

The state can offered to do all this "developmental work" almost on a charity basis, i.e. offer loans at very low rates, because it has at its disposal the *capital* sum of 40 million francs offered by the *Banque de France*, the government banking institution, without any interest what soever. The government obtains, moreover, from the same source an annual grant of between 2 and 6 million francs, specially for the same purpose.

Thus, while at the bottom the French system of agricultural credit is essentially nothing but *local mutuality* i.e. personal initiative and interdependence of intimate acquaintances, the principle at the top is essentially governmental philanthropy, which in current philosophy is but an aspect of *etatisme* or state-patriotism.

CHAPTER XV

GERMANY FROM WITHIN

GERMANY'S HOPES

FRANCE and Belgium have been officially notified by Great Britain (August 11, 1923) that the occupation of the Ruhr was not justified by the treaty of Versailles. For the German people the day seems at last not to be far off when the beginning of the end of the "Entente" might be confidently depended upon as a fact of international

politics. Even the "*Temps*" "*Matin*" and "*Debats*" of Paris have hardly any doubts on the score.

With the exception of slight foreign complications in China, the world situation appears to be calm and quite favourable to Germany. Moreover, England happens for the moment to be relieved of the Angora problem and is free to attend to European affairs "intensively". The German ministry under Stresemann can expect more than a lip-sympathy from the diplomats of London.

What is the meaning of this pro-German sentiments on the British side? Through American mediation at Lausanne the Turkish question has been solved not unsatisfactorily for "Anglo-Saxon" commerce, industry and finance. And enriched with the other gains as she happens to be, Great Britain does not seem to be ill advised when her Gurzons and Baldwins attempt the game of playing off German public opinion against Poincare.

BRITISH INTEREST IN THE RUHR POLITICS

It must be noted at the outset that the Franco-Belgian adventure has meant good business for Great Britain. Not only Germany—but all the continental countries which used to get supplies from the Westphalian districts in the Ruhr Basin—have been compelled to place a considerable portion of their orders with British firms.

The Ruhr action of France and Belgium has thus solved partly the labour problem of England. The unemployment crisis has decidedly improved. Great Britain's credit in regard to the war loans from the United States has also been for the time being influenced very considerably. The pound sterling has risen compared to the dollar.

Early in the year Great Britain could therefore afford to give the allies a free hand in regard to the Ruhr and

"watch the experiment". The moment, moreover was opportune, as there was the possibility of a bargain being struck. For in dealing with Angora the "allies" were not much unwilling to give her a free hand too.

EXTINCTION OF GERMAN WAR INDUSTRIES

While displaying her solicitude for new Germany, England is not unconscious of one great disadvantage on the German side which is a blessing to her own interests. Germany has been compelled under provisions of the Treaty of Versailles (article 169) to destroy or part with all those industries which directly or indirectly contributed to the manufacture of arms, munition and implements of war.

It is said that no less than 337 private factories, worth about 27 milliard gold marks (1m-12 annas) have already been destroyed. Destruction has been faced by Government installations to the value of 21½ milliards. The greatest munition factories of Germany known as the "*Deutsche Werke*" have also completed the destruction of 250 buildings and 107000 machines.

Germany has, further, surrendered to the Entente 514 Government aeroplane sheds, 36 air ship sheds as well as 15 hydrogen generating plants. Among additional losses in this line about 180 aeroplane sheds and 12 air ship sheds belonged to private proprietors.

Like the destruction and surrender of the German navy the process involved in these destructions and surrenders is calculated to demilitarize the people. But its importance as a factor in the partial chemical and mechanical disarmament of Germany is no less patent to industrial powers like Great Britain.

THE ORE SITUATION

But at this stage it is well once more to remember that Germany although navally, militarily and colonially

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extinct, is still quite a formidable power as an industrial and commercial unit. Exactly at what stage of the political weakness and helplessness of the Germans the English people will be spiritually prepared to finally break off with France and extend their friendship to Germany remains to be seen. It is certain, however, that British industry and commerce can hardly afford to be aggressively friendly to a nation that continues to be a powerful competitor in all fields of business enterprise.

Notwithstanding serious handicaps Germany has been going ahead all along the line. Even in the iron industry and in the ore situation generally German prospects are anything but gloomy.

In Lorraine, Luxemburg and Upper Silesia about 28, 500,000 tons of ores used to be extracted previous to the war. In 1913 the total extraction from these regions amounted to about 80 per cent. of German ores. All this has been lost to Germany as a result of the decisions at Versailles and Geneva.

In 1922 only 6,000,000 tons have been extracted in Germany. Not more than 2,000,000 tons of pig iron can be obtained from this amount of ores.

The present capacity of the German blast furnaces however admits of an annual output of 11,000,000 tons of pig-iron. Should therefore the furnaces have to be kept in working order, German iron industry will have to depend on the importation of foreign ores.

In fact, Germany has already had to purchase Swedish and Spanish ores. The French meadow-iron ores (minette ores) are not much in demand as they require plenty of coke. The ores from Sweden and Spain are preferred especially because they are more ferriferous. Canada also has sold ores to Germany.

Indian merchants who import machineries from Germany and customers of German iron industry in any part

of the world do not however need be pessimistic about Germany's capacity to deliver goods. For German manufacturers have entered into contract with Sweden for the supply of ores. The contract is to last for at least one decade. In the meantime Germany has boycotted French iron and ores with the result that in Lorraine more than 75 per cent of the blasts have been closed down.

THE SUPPLY OF COAL

The coal situation also is being managed by Germany in quite a masterly manner.

It is believed that France is to-day the richest ore-producing country in Europe. But since her coal supply does not correspond to her resources she has proceeded to monopolize the coke in the Ruhr region. The production of French iron is tending to reach its maximum level.

By the treaty of Versailles Germany lost 25 per cent of her coal supply owing to territorial readjustments. Germans in pre-war days used to export coal. Since 1919 they have been forced to import it.

In 1913 the consumption of coal in Germany amounted to about 119 million tons. In 1922 the total amount ready for delivery was about 99 million tons. Of this amount reparation deliveries covered about 19 million tons. So that about 80 million tons of coal, i.e. about two-thirds of the coal consumed in Germany in 1913 could be raised in 1922 from native sources.

For about 33 per cent. of her home consumption Germany has therefore to depend on foreign supplies. The loss of Ruhr has certainly added to the difficulties which Central and Southern Germany had all this time been experiencing. Germans have been compelled to look for more coal from abroad.

Germany's industry, however, has developed a new phase, which makes it considerably independent of anthracite or coke and hence independent of foreign supplies.

The factories of Saxony and Middle Germany which are much more important in Germany's exporting life than the Rhineland, are mostly worked by "soft coal" or electricity generated therefrom.

Besides, Germany's native coal fields are not yet all worked to the fullest capacity. Not even 70 per cent of the coal in German Silesia has been exploited. The Ruhr problem is forcing the attention of German industry to the necessity of a 100 per cent exploitation.

Coal of the best quality is known as anthracite. With the loss of the Saar Vally Germany lost her supply of this excellent coal which constitutes the specialty of the mines in that region. But the Silesian coal which yet belongs to Germany is a still superior kind of anthracite.

The coal that is to be found in some parts of Rhineland and Middle Germany is of a very inferior quality. It is called ignit or "soft coal." This eleventh rate stuff was improved during years by patient scientific research. Industrial manipulation as well as the exploitation of by-products made it possible even for "soft coal" to develop into a successful business proposition.

One great way of making the best of a bad case lies in the utilization of this inferior material as fuel for power-houses. As such the "soft coal" deposits of Middle Germany are being regarded as a God-send by the factories and the electric installations of the region. Germany's industries and railways are tending to become independent of the "coal problem".

GERMANY WITHOUT RHINELAND

In Germany's business psychology the entire Rhineland has got virtually separated from Germany. Resources for factories and workshops have been therefore being sought elsewhere. The idea of imports from foreign lands

not only as regards raw materials, but also as regards coal and fuel supplies has got well-rooted, in the mentality of Germany's financiers and industrial magnates.

For the resources of Germany as an industrial power one must not, besides, be obsessed by the greatness of Rhineland (including the Saar and the Ruhr). Not more than 25 per cent of Germany's export industry lies in this region.

Seventy five per cent. of German industry lies in Eastern Germany (with Silesia and Saxony) and in Southern Germany (Bavaria and Baden).

The Leeds and Manchester of Germany are located in Saxony. The textiles-velvets, blankets, alwans or shawls, embroideries etc. of Chemnitz are well-known in India. Westphalia (in its unoccupied parts) produces hosiery, boders and so forth.

Iron industry is located in Baden, Pfalz (Bavaria). Silesia and Southern Saxony (Freiburg. Zittau etc).

Bavarian works manufacture paper. Agricultural machineries also have their centre in Southern and Middle Germany.

The market for India's jute and cotton, for instance, is Middle Germany and Saxony. Linseed-oil is consumed in the workshops not only of the Rhineland but also of Bremen, Middle Germany as well as Baden. Middle Germany is likewise a market for spices.

It is on this seventy five per cent. of her resources that Germany, deprived as she is of the Rhine-Ruhr, has been concentrating her energies. An intensive exploitation of the already working concerns is therefore on.

The political end that was being served by the tactics of "satyagraha" (passive resistance) which the working-men, engineers, factory-directors and officials of the

occupied area offered to the industrial-military invasion is obvious to all. But what is of supreme importance to the commercial interests of all nations is the fact that steps have also been taken by German financiers and industrial heads to maintain the level of efficiency at which the world-trade has always been served by Germany.

THE INDUSTRIES OF THE RUHR-RHINE

Besides, the Westphalian districts in the Ruhr Valley as well as Mannheim and other industrial cities on the Southern Rhine are indeed in the hands of the Entente. But they are not demolished, ruined or damaged. The entire Rhineland continues to be a "going concern".

The "satyagraha" and "hartal", passive resistance and strikes on the side of German heads and hands have not been able to bring the railways and industrial works to a standstill. The politicians of the "Entente" have all the time been importing workingmen from Poland and Tehecho-Slovakia, who as a rule speak German, in order to keep the concerns in working order.

The alienation of the Westphalian districts (Ruhr Basin) from Prussia and of Mannheim and other cities from Baden and Hesse amounts industrially and commercially speaking to nothing more not less than what the previous alienation of Alsace-Lorraine, the Saar districts and the main portion of the Rhine Valley have amounted to. In other words, the worlds trade with Germans of the Western province of the late German Empire is to-day not more endangered than it may have been, if at all, by the Treaty of Versailles.

The business world, both in Germany as well as abroad, is getting oriented to the Rhineland together with its south-eastern Saar and its north-western Ruhr wings—as an independent economic unit. British and American

merchants have begun to visualize this independence of the Rhineland in its absoluteness and entirety.

Whether the Rhineland is a province of the German Republic or becomes a vassal of the "Entente" or grows into a completely sovereign state as some Rhinelanders desire, is a political question. This does not affect the capabilities and potentialities of the region as buyer and seller of goods.

As an industrial unit the Rhineland is thus but another of the new economic factors like the Baltic States, Poland Tehecho-Slovakia, Hungary and so forth which are to be seen on the new political map of Europe. The demand for Indian raw produce such as manganese, linseed, and drugs cannot therefore be slackened in the foundaries, factories, and chemical works of the Rhineland.

The temporary and partial closing of the Rhineland to the Indian market cannot in any event much affect the export of German machineries to India. For, India's demand along this line is supplied not so much from the Rhineland itself as from other provinces of Germany, as has already been indicated.

But most of the German chemicals imported by India have their origin in the factories of the Rhineland. And in so far as the export from Germany is affected the situation promises to be tremendously favourable to the British and American chemical industry. The dye stuffs of England and the United States have actually been enjoying once more the conditions of the war period during which Germany was shut out of the field for competition.

Steel products such as beams, angles, plates, cranes etc., constitute another line of deliveries for which the Rhineland is responsible. Not only the iron magnates of

Great Britain and the United States but the Iron and Steel Companies of India also have a boom before them.

Indian "*Swadeshi*" movement can perhaps to a certain extent taken advantage of the present world-situation in exactly the same manner as the British and American manufacturers.

It is with the object of inflicting a heavy economic and political loss on Germany that the Franco-Belgian occupation of the Ruhr and the Southern Rhine has been consummated. Behind this occupation there has operated up till now also the backing of Great Britain and the United States,—united as all these war-time allies and associates are in the crippling of Germany in industry and commerce.

PUBLIC HEALTH AND SOCIAL EFFICIENCY

The weakning of Germany is evident also in rather unexpected directions. There is a great disadvantage from which Germany is likely to suffer in competition with England and other industrial powers for some time to come. The "*Statistisches Reichsamt*" has pointed out the decline in public health which began during the war period on account of privations and inadequate sanitary arrangements. The mortality line is being described as already on the upward curve. The "abrupt rise in food prices and the distress experienced in all branches of economic life" are being explained as agencies that are "bringing the German people nearer and nearer to a collapse in healthy and efficiency."

Perhaps one need not be too pessimistic about Germany's vital statistics. But for students of Indian economics nothing can be more interesting than the manner in which the casual nexus between poverty and disease is being demonstrated in German scientific and official circles.

The mortality in the large cities of Germany rose during the years 1921—22 from 12·6 to 13·4 deaths per 1,000. If the number of deaths is not still large, this is accounted for by the wellknown fact, we are told, that hunger and famine do not kill at once but often only bring about the end after a prolonged period of suffering and torment.

But the symptoms of physical degeneration are already patent. "The deceases caused by hunger, cold and dirt are appreciably increasing," such for instance, as eczema, scurvy, skin disease, debility, gastric trouble, nervous disturbances. Infant mortality is also on the increase. It rose from 12·1 to 12·8 per 100 babies in 1921 and 1922. Infantile paralysis is spreading. Tuberculosis has been claiming more and more victims.

Fifty per cent of children of school-age are reported to be insufficiently nourished and anaemic. School-teachers accordingly complain of dull listless school boys and school girls with little mental receptivity and incapable of gymnastic exercises.

German data and German logic, although covering a period which evidently is but temporary may be drawn upon by Indian sociologists in their discussions on India's physical strength and social vigour. In the meantime England will not have failed to take note of the weaknesses in Germany's economic situation.

THE BEGINNINGS OF A NEW RHINELAND IN CENTRAL GERMANY

Industrial Germany cannot, all the same, be crushed by temporary political and military misfortunes. The tenacity and strenuousness of the German people have been constantly at work.

Those who have watched the industrial development of Germany during the last decade are aware that the

beginnings of another Rhineland have already been laid in the very heart of Germanic territories. It is to Middle Germany that the eyes of Germany's economic "futurists" have been falling with greater and greater interest,—since the decisions at Versailles and Geneva regarding the Rhine Basin and Silesia.

The building up of another Rhineland was indeed almost a military necessity for Germany during the war. The situation of the Saar, the Rhine and the Ruhr on the borders of France and Belgium was considered to be a source of peril to Germany in a possible war of defence. A territory had to be sought which would be far away from the Eastern and Western borders.

The resources of Central Germany whose exploitation had but slightly commenced began during this period to demand the closest attention on the part of industrial pioneers. This new field of industry includes Southern and Eastern Harz, Northern Thuringen and Northern Saxony.

The city of Halle, a university centre, may be regarded as the Cologne of this new Rhineland. The boundaries of this territory include, roughly speaking, Erfurt, Weimar, Dresden, Magdeburg, and Berlin. Towns like Merseburg Weissenfels, Naumburg, as yet but little known have every possibility of growing into the Essens and Dusseldorfs of the future.

The land, mainly agricultural up till now, is fast being industrialized. For instance, mines of "soft coal" are being worked throughout the area between the Saal and the Elbe. Potash fields have contributed to the attractiveness of the locality. Slates of copper have also been found. New chemical factories are establishing themselves in Wittenberg, Bitterfeld, Merseburg and other cities.

One must not look to a rather remote future for all this development. Already the power-houses in Berlin are being fed from the central power factory in Golpa. Some of the railways have been electrified. Industrial works are being operated with the power generated in this region. The Leipziger Land Kraftwerke, Kulkwitz, Doltz etc. like other electric works of the territory, have rendered the important German industries of to-day considerably independent of coal.

A city that has already made its appearance felt is Merseburg. The Leuna-work has been founded here by the famous Anilin and Soda-Works of Mannheim (Baden) in order to manufacture ammonia. More than 10,000 workers are employed in the factory.

Merseburg is situated in an area which commands brown "coal" fields to the extent of $6\frac{1}{2}$ miles in length, $2\frac{1}{2}$ miles in breadth and 90 yards in depth. The resources of the environs have led to a swift expansion of the city.

In 1913 there were 4,700 factories in Merseburg. As the beginning of 1923 the number is 5,800. The number of workingmen has increased during this period from 101,000 to 160,000. In this calculation are being excluded the miners, builders and small concerns which employ no machineries.

The now famous Rhineland has grown into its present proportions only during the last generation. It is the aftermath of the Franco-Prussian War (1870) that gave fillip to the development of industry in Germany's western borders. The new Rhineland has been growing up under our very eyes as the result of the recent war (1914). And in the development of the new as of the old Rhineland one thing that is operating more than other force, is science and its ally, invention.

The responsibilities on German science at the present crisis are immense. Every chemical research especially that carried on in factories and workshops, is therefore being most carefully guarded. Chemical works are not prepared even to advertise their novelties. The German world of invention is trying to maintain an absolute silence in regard to its activities.

In all this area village and farm life which has been so prominent up till now is succumbing to new conditions created by urbanization. In the struggle for existence agriculture is being weeded out by industry. The questions regarding the density of population, the housing problem, the modes of communication and so forth have arisen. In order to grapple with these social problems the Prussian ministry of national welfare has commenced investigations in regard to townplanning for this new Rhineland.

"DEVELOPMENTAL" ACHIEVEMENTS OF THE GERMAN GOVERNMENT

Among the recent social developments in Germany one should not overlook the enormous amount of "developmental" work which the government has been accomplishing for the people in manifold ways. German legislation, "socialistic" as it has been for over one generation, has continued to function along its traditional paternal lines during and since the war. The comparative absence of social unrest and the maintenance of well-ordered happiness in all classes of German society are to-day as ever before being assured by state expenditure on an enormous scale.

Let Indians visualize what it would mean in Indian social, economic and cultural life if a Government were to take charge of maintaining 63,000 cripples, 367,000 widows and 1,050,000 orphans. This is what the German

Government has done in 1922 with a total expenditure of 226,000,000 gold marks in a population of about 58,500,000 inhabitants. It is superfluous to add that the pensions to cripples, widows and orphans are some of the soundest investments in national wealth and strength.

In order to "prevent" unemployment the German Government has undertaken several public works. The completion of the canal from Hannover to Peine, the canalization of the Neckar and the establishment of navigable connection between the Rhine and the Danube are the enterprises which have been launched on a budget of 600,000,000 gold marks to be spread over several years. In 1922 the items cost 38,000,000 gold marks.

Owing to currency depreciation the private charitable institutions were not in a position to maintain the standard of their sanitary and cultural work. The Government has come to their aid with a grant of 3,000,000 gold marks. This sum is included in the above 38 millions.

There has been a lot of hardships in the German middle class owing to the depreciation of currency and rise of prices. The "*Kleinrentner*" i. e. people who lived on the interest of a small capital were particularly hit. Such and other families in need have been taken care of by the Government with subsidies, reductions in the prices of goods and so forth. The Government has likewise contributed grants in aid to the erection of dwelling houses for workingmen.

Last but not least comes the outlay on "social insurance", i. e. insurance against sickness, accident, death and unemployment. For all kinds of workingmen's insurance the German Government has been partially responsible in a financial way since 1886-1890. All these social welfare subsidies have in 1922 totalled 109,000,000 gold marks.

Altogether, the benevolent functions of the Government for 1922 have been responsible for 378,000,000 gold marks. Now the entire public expenditure of Germany (excluding the disbursements necessary to fulfil the Treaty of Versailles) amounted to 1450 million gold marks. In other words, about 25 per cent of the Government expenses was devoted to "developmental" work among the people.

The moral is clear. The health, strength and comfort of every single individual in the German nation—man, woman, or child,—is being consciously although silently looked after by the automatic processes of legislation. And Germany thus equipped and armed can still venture on claiming its "place in the sun".

N.B.—The following publications will throw light on the material in this chapter; Singer's *Staat und Wirtschaft seit dem Waffenstillstand*. (The State and Economic Life since the Armistice), Jena, 1924; Aubins *Entwicklung und Bedeutung der mitteldeutschen Industrie* (Development and Significance of Central-German Industry), Halberstadt, 1924; Uferman's *Koenige der Inflation* (Kings of Inflation, Stinnes, Castiglioni, Wolff etc.), Berlin, 1924; Plaut's *Deutsche Handelspolitik*; Leipzig, 1924.

See also the account of the industrial education of the soldiers in the *Handbuch fuer Berufs und Fachschulwesen* (Leipzig 1923) edited by Kuehne.

To understand the economic urge behind France, in the politics of the Rhine-Ruhr, see the account of French coal and ore resources at the end of the war in Pinot's *Le Comite des Forges en France* (Paris 1919). A recent contribution is *L'industrie du Fer en France* (Paris 1922) by Levainville.

For political orientation see the chapters on Germany in my *Politics of Boundaries* (Calcutta 1925).

CHAPTER XVI

ECONOMIC DEVELOPMENTS IN RUSSIA

WHATEVER other influences, financial and international, the Genoa Conference in the spring of 1922 may have had on the world, it served to advertise the abilities of Tchicherin and other Russian statesmen in diplomatic circles and what is more, to introduce Soviet Russia as an economic force to the business world. The commercial "recognition" of the Bolshevik republic by the bankers, merchants and captains of industry, no matter how the situation stood in regard to the political, became an accomplished fact.

PROPERTY LAW

On the question of this commercial *rapprochement* the legislators of the Soviets met the world half-way. For on June 18, 1922 the *Izvestia* of Moscow published the text of the property law of the Bolsheviks which had come in force on May 22, a law which could hardly evoke strong prejudices in the minds of the traditionally oriented businessmen of all nations. By this law the right to own property has been conceded by the government to individuals. In regard to inheritance, however the total value is not to exceed 10,000 gold rubles (1 ruble = Rs. 1½).

The legislation is still very drastic in a certain degree.¹ But the taxation policy of the world to-day indicates which way the wind is blowing. In Tschechoslovakia, a state whose administration is committed to enmity with Bolshevik economics, a law on succession has been passed which would tax inheritances over 10 millions to the extent of 25 to 55 per cent. Even in England the Labour

1 Patouillet's *Les Codes de la Russie Sovietique* (Paris, 1925.) See also the chapter on Russia in my *Politics of Boundaries* (Calcutta, 1925).

Party, although non-communistic, in the present electoral campaign on the unemployment issue proposes "progressive" taxation of all incomes above £ 5000.

While therefore, communistic tendencies are apparent in the law-making of "bourgeois" states, in the communistic republic itself the "back" to bourgeoisie and private propertyism is on. Steps in the economic development of Russia under this new regime can be traced in the exhibitions in which she has played a part since the summer of 1922.

GOVERNMENT FAIRS AND PURCHASES

It was in July of that year that the world-famous Novgorod Fair was reopened by the Russian government. Trade with Turkey and Germany played an important part in that international display which served to register also the amount of reconstruction that had been effected in Russian industry and agriculture. In August there was held the annual *Messe* at Leipzig. The value of furs and fur goods exhibited by Russia in this fair was priced at 3 million gold rubles. In the simultaneous German fair at Koenigsberg, on the Baltic Sea, also, Russia was strongly represented.

The purchasing capacity of the government was at the same time inspiring confidence among the industrial nations. The claims of the Soviets as paying market for foreign goods could no longer be ignored when the people's commissar for foreign trade declared that during the first six months of the year 1922 the Russian Republic brought goods worth 80 million gold rubles. Of this sum 30 millions were spent on food products and 11 millions on the import of metals and machineries.

AGRICULTURE AND INDUSTRY

For Russia as for Turkey one of the chief economic problems consists in the development of agriculture on

improved methods. In order to introduce German agricultural machinery the Soviet Government considered it advisable to grant a license to the Krupp firm, which, be it observed *en passant*, has always been mainly interested in the manufacture of industrial, farming, scientific and other implements, not more than 5 per cent being war-material previous to 1914. The Krupps have already established experimental farms in the Don Cossack district. Not more than 50 per cent of the workers are to be of German origin according to the terms of the contract.

During the economic year (October 1922—Oct 1923) agricultural production amounted to 52 per cent of that in the pre-war year. The area of the land under cultivation was above 70 per cent of that in 1913. Industrial production was registered at 45 per cent. The works comprised coal, naptha, crude iron, steel, rolled metals, as well as raw textile wares, yarn, woollens, and linens. In each of these items the figures given by the *Ekonomitscheskaja Shisn*, the Russian journal used by German exporters and statisticians, show very high increase over those in 1920-1922; indicating a steady improvement from the conditions of the war and revolutions.

In 1922-1923 the industries employed 1,476,000 workers. The figure is more than half of that in 1913, (2,598,000). The monthly average wage was 12 as against 22 units of the same value in 1913. But in Petrograd and Moscow as well as in some important industrial centres in the provinces the wages of the working men were sometimes as high as 78 per cent of the pre-war rates.

SOKOLNIKOW'S FINANCIAL POLICY

A new fiscal policy has been inaugurated by Sokolnikow the commissar of finance.

Since the establishment of the State Bank, and especially the issue of "gold rubles" known as

Tscherwonetz [1 Tsch=10 rubles (1923)=Rs. 15] vast amounts of paper money have been withdrawn from circulation. "Covered" banknotes have been on the increase, representing not less than 45 million gold-rubles. From inflation to deflation the advance is marked.

Taxation is playing a great role in finance. Taxes in money have been fast replacing the experiment of taxes in kind, says a writer in the *Nation* of New York.

The revenues of the state in 1922-1923 have increased 50 per cent. over those in 1921-22. The deficit was not more than 25 per cent. whereas the budget for the previous financial year carried a deficit of 80 per cent.

The emission of notes (paper rubles) has fallen considerably. Only 21 per cent. of the deficit had to be covered by such notes whereas in 1921-22 the percentage was 39. The tendency is to foster the revenues by taxation rather than by the note-printing press.

It is interesting to observe, as remarks the *Deutsche Allgemeine Zeitung* (Berlin), that by September 1923 the State Bank was able to advance to industry a total loan of 10,105,000 Tsch. The mining and foundry companies obtained 3,889,000 whereas the machine-industries 1,938,000. The agricultural interests have also been financed to the extent of 100,000 Tsch.

In the race for capturing the Russian trade no power could long afford to be a mere on-looker. Even France, although financially the greatest loser on account of Soviet Russia's cancellation of all old-regime state-debts to foreign nations, has run into the game. The *debut* was made by the chamber of commerce at Marseilles which officially invited the director of the Novogorod fair to organize a Russian section for the exhibition at Lyons. Senator Monzie who was deputed to study the situation in Russia has come back with optimistic reports.

FOREIGN TRADE A STATE MONOPOLY

The foreign trade of Soviet Russia has finally been made into a state monopoly. Since April 1923 no private person or corporation, Russian or foreign has been by law entitled to deal in export. Every commercial transaction of an external character, says the *Berichte aus den neun Staaten* (Vienna), is being carried on by the government's commissariat for foreign trade. It is only when this commissariat grants a license or concession that a company can lawfully undertake a business proposition in goods or interests affecting Russia's relations with other lands.

About 500 business houses are said to have applied to the Russian government for trade concession. Among them there were 300 German interests. The number of American and English concerns was equal, about 55 each. France was represented by 50 houses. But the Soviet Republic has granted concession to only 28 applicants, of whom 4 are English, 6 American, 10 German, and the rest Dutch, Danish, Swedish, Norwegian, Italian etc.

NEW PROSPECTS

Altogether the new year is beginning under favourable auspices. On the invitation of the Austrian industrial interests the government of Soviet Russia is going to open a section of Russian goods at the spring *Messe* of Vienna which will take place in the second week of March 1924. The Viennese bankers, whose readings and judgments influence the banking world in all the states comprised within the old Austro-Hungarian Empire as well as the entire Balkan finance system, are much impressed by the fiscal and currency reforms effected by Russian statesmen during the last year.

Overtures from the Italian side promise to be more far-reaching. On December 1, Mussolini has declared

that Italy is prepared to make' the *de facto* recognition of the Soviet Republic a *de jure* one, provided Russia offers concessions in regard to the export of her raw produce to Italy. The Fascist Premier expects greater maritime freedom and economic expansion for Italy, once her Russian relations are placed on a normal basis, says a correspondent of the *Journal de Geneve*.

RUSSIAN ECONOMICS AND INDIA

As Russia is no longer a closed country, it is time for Indian trade interests to wake up. The oil seeds of India, to cite an item, have long had a valuable market in Europe and America. Russia is going to be a very strong competitor. In the South Eastern regions, rich as they are in oil-seed fields, the Russian peasants, have during the present year brought several new areas under cultivation. The total area has gone up from 405,000 to 675,000 acres. Similarly as a source of manganese, the material so valuable in the production of steel and therefore indispensable to every industrial power, Russia is a powerful rival whom India has to reckon on the international market. Russian economics cannot evidently be neglected by the Indian stalwarts of foreign trade.

The fifth anniversary of the Soviet Republic of Russia was celebrated at Moscow on Nov. 7 (1923). A Swiss traveller who was present at the ceremonies writes on Nov. 20, to the *Neue Zurcher Zeitung* (Zurich), the organ of industry and banking, as follows: The nervousness of the first years of the revolution and the typical revolutionary manifestations of life which the people of Western Europe are used to associate with the happenings in Russia are all things of the past." Everything in Moscow appears to this observer to be quite normal, except that the colour red continues still to

dominate the aesthetics of the Russian painters, illustrators, cabinet-makers as well as proprietors of store both small and large. ¹

CHAPTER XVII

LEGISLATION ON INDUSTRIAL INSURANCE

PROPOSED LEGISLATION IN FRANCE

THE French *Chambre des députés* has been devising a scheme of legislation for industrial insurance, or as it is known in French, *les assurances sociales*. The government is bent on taking immediate steps in order to relieve persons with incomes not exceeding 10,000 francs (about Rs. 2000) per year and cover their risks such as arise from sickness, maternity, old age, invalidity and death. The insurance is to be compulsory.² Premiums are to be paid at the rate of 10 per cent of the wage, of which half will be charged of the employer and the rest of the employee. Altogether 9 million persons are going to be insured in this manner.

The system was introduced in Germany by Bismarck in 1883 in order to cover sickness. In 1889 it was extended to old age. Since then Germany has found imitators among many nations, for example, Austria, Belgium, Spain, Portugal, Roumania, and so forth.

Although on the face of it the subject of social or industrial insurance should appear to be one that needs no special pleading, many of the leading economists of France are up against the legislation that is on the

¹ The material in Fuckner's *Russlands Neue Wirtschafts politik* (Leipzig, 1924) is valuable for the topics of this chapter. See also Freund's *Russlands Friedens und Handels verträge* (1918-1923) (Leipzig, 1924).

² For "private" insurance already in force, see the historical account, *Les Oeuvres sociales des industries métallurgiques*, (Paris 1924), by Pinot.

anvil. The opposition is focussed in the *Societe d'Economie Politique*, the Association of French Economists, which arranged a discussion on the topic in one of its recent *seances*.¹

ECONOMIC AND ADMINISTRATIVE OBJECTIONS

M. Villey says that the scheme is philanthropic but is contrary to the principles of economics and is likely to produce evil consequences. In the first place, the incidence of the premium will tend to fall on the employer. But will it not in that event ultimately touch the workingman's wage? In any case the wage-earner's own foresight and sense of individual responsibility is likely to be killed.

In the second place, the administration of the law will be attended with corruption which it is almost impossible to avoid. The law of insurance against accidents which came in force in 1898 is conceded to be more reasonable than the one that is coming. And yet the reports about French medical aid have succeeded in filling the public mind with disgust at the scandalous manner in which the insurance is administered. The same fraud and immorality are now going to be perpetrated on a nation-wide scale when 9 million men and women become the subject of compulsory insurance on so many different lines.

FRENCH INDIVIDUALISM AGAINST STATE INTERFERENCE

A President of the *Societe*, M. Yves-Guyot, late minister of public works and author of numerous volumes on economic subjects, remarked that it was in order to divert the masses from the socialistic ("social-democratic")

¹ See the *Bulletin dela Societe d'Economic Politique* (Paris, *Annuaire* 1924).

movement of the times that Bismarck instituted the social laws calculated to strengthen the state in the eyes of the working class. But said he, "France is a country of savings and foresight and does not need a legislation on the subject. Everything that the state attempts in the way of interfering with individual liberty is the surest means of killing the individuals and destroying their spirit of foresight."

When the government becomes the guardian of the people and assures them of a living under all conditions the effect can be only morally disastrous to the nation, says M. d'Eichthal, director of the *Ecole libre des sciences politiques*. The journal, *Reforme sociale*, in one of its issues of 1923 cites cases mentioned by Dr. Wemangel of Strassbourg before the *Union des Syndicats medicaux de France* in which certain individuals are said to have expressed a desire to be sick in order that they might enjoy the benefits of the insurance against sickness.

Senateur Raphael-Georges Levy is of opinion that liberty must be maintained at any cost. He would have no legislation that is likely to disturb the "order of nature." The dangers and risks to which the working class is liable should be provided against by itself in and through the development of "mutuality."

The majority of French "scientists," advocates of *laissez faire* and individualism as they are, is convinced that insurance is an item which individuals must be taught to attend to privately and with private insurance companies. The state should, if at all, function as a mere inspirer in this connection. According to this view social statutes are essentially disturbing elements in the body politic and must be avoided by all means.

COMPULSION NO HINDRANCE TO *Mutuality*

Advocates of legislation on insurance contend, on the other hand, that individual initiative and "mutuality"

are not killed by the system of compulsion. In France, says M. Salvador, for instance, there are 23,000 insurance societies with 4 million members and 800 millions as capital. The proposed law will take care of those who have not been able to make use of the mutuality and encourage them along this line. According to Dreyfus the compulsory insurance will afford a great schooling to the wage-earning class in foresight and administration of collective funds and thus help wean French labour away from Bolshevism.

A GERMAN THEORY

Let us listen to the experience of the people on the other side of the Rhine. As has already been pointed out, Germany is the pioneer of industrial insurance.

In 1907 lecturing at the Industrial Club of Chicago, Professor Schumacher (then of the University of Bonn, now of Berlin), concluded as follows: "The result of all these measures is that Germany is today ahead of all other countries in the matter of arrangements for the protection of life and health. We largely attribute the most remarkable feature in the modern development of our German nation, of modern German life, to this industrial insurance legislation.

"We are convinced that only on the basis of such a far-reaching industrial insurance legislation that object could be attained of which we are so proud, an increase of our population together with the great improvement of the standard of life in the broad masses of our people".

ADVANTAGES OF COMPULSORY STATE INSURANCE

State insurance was completely developed in Germany in the decade from 1881 to 1890. Since then it has comprised three great branches: (1) insurance against sickness, (2) insurance against accidents and (3) insurance against permanent disablement.

"Owing to the inadequate education of the worker", says Schumacher "free insurance could not be carried out in a satisfactory way". Compulsion was therefore necessary. From the practical standpoint also compulsion has been efficacious. It has assured the necessary economic basis for an insurance scheme, namely, a large number of persons to be insured. It has also been financially advantageous, combining as it does both good and bad risks. Last but not least, compulsion has served to reduce the cost of administration by eliminating the expenditure for agents, the commissions for soliciting, the cost for advertising and the physicians' fees. In Germany, it may be pointed out, the expenses of free private insurance come up to about three times those of state enterprise in accident.

THE BURDEN OF INSURANCE

The French law proposes to make both the employer and the employee responsible for the premium of insurance to an equal extent. But the German system has certain special features. For the sick insurance (law of 1883) two-thirds are paid by the employees and one third by the employers. Against old age and disablement (law of 1889) the state bears a part of the burdens of insurance together with the other two parties. But the employers are exclusively responsible for accident (law of 1884).

Within two decades of the legislation Germany had 11½ million people on the sick insurance lists. There were over 23,000 sick benefit societies under imperial or local control. 13½ millions were insured against old age and disablement and 18½ millions against accident. The accident insurance really covered almost one-third of the entire German people (c. 1904).

OLD AGE AND INVALIDITY

A word may be said about the insurance against old age and invalidity i. e. permanent disablement. Two

classes of people are compelled to insure : (1) all working men, assistants and apprentices in every branch of trade above the age of 16, (2) employees in offices, engineers and shop assistants, pilots, also teachers with limited incomes.

By old age is meant the 70th year. At this age every German obtains from the Government an annual pension of 50 gold marks (Rs. 37) and from the insurance fund a sum not exceeding 230 gold marks (Rs. 170).

For permanent invalids also the Government's contribution is 50 gold marks per year. From the insurance fund they obtain a sum not exceeding 450 gold marks (Rs. 320).

ACCIDENT AND DEATH

Accident includes death. As the problem of the widow and the orphan is attended to by this law one can easily guess what a tremendous sense of security and economic staying-power is felt in everyday life by 33 per cent. of the population in Germany.

In case of the employee's death while at work in a factory the law provides that the employer is to pay the expenses of the funeral. A pension is also assured to the relatives. The widow obtains 20 per cent. of the actual earnings of the deceased or of the average local wages. Each child until the age of sixteen also obtains pension at the same rate.

The compulsory accident insurance has forced the employers in every way to endeavour to prevent accidents. They have been compelled also to see to it, out of sheer self-interest, that the disabled should be radically cured in order that he may not be a burden on the pension-fund. They have further found it "paying" to establish large sanatoriums in healthy places.

Hospital and institutions for combating tuberculosis and other dangerous diseases have been erected by the employers as well as the authorities out of funds of the old age and disablement insurance. Housing conditions have been improved in industrial areas of the Rhine-Rhur.

RECENT GERMAN LEGISLATION

The German law on social insurance has been improved in details during and since the Great War. The fundamental features remain the same, however. *Die Sozialpolitische Gesetzgebung* i. e. "Socio-political Legislation" (Zentralverlag Berlin, 1921,) by Kaskel, and *Arbeitsrecht and Arbeiterschutz*. (The Rights and Protection of the Working man), of which the third edition has been published in 1923 by R. Hobbing of Berlin, furnish the latest developments in this branch of Germany's social endeavour.¹

CHAPTER XVIII

LESSONS FROM THE NEW STATES

EACH one of the new states that lie between the German, and Russian spheres and between the Baltic sea and the Eastern Mediterranean is an India in miniature.

COMMUNAL INTERESTS

In the first place, so far as politics is concerned, there is in each of these countries a race (and language) problem. To this has to be added the religious question. The entire territory is the battle ground of Teutonism *versus* Slavism as well as the cockpit of Catholic and Greek Churches, Protestant and Jewish interests. Along

¹ See the words "Pension", "Wit wen-und Waisen pensionen" etc. in M. Fleischmann's *Woerter buch des deutschen Staatsu. Verwaltungsrechtes* (Tuebingen, 1914); L. Heyde's *Abriss der Sozialpolitik* (Leipzig, 1920). cf. Andreani's *Legislazione sociale* (Rome 1920) for the position in Italy as well as for a general bibliography in regard to Europe.

with it comes naturally the problem of "national" education adapted, as it has to be, to the requirements of the warring elements in these countries. The Paris decisions of 1918-19 have saddled every inch of this whole region of so-called "nationality" states with the responsibilities and rights of the "minorities."

AGRICULTURE VS. MANUFACTURE

In the second place, economically speaking, each of these states embodies the efforts of semi-developed and more or less chiefly agricultural peoples at imbibing the culture of the more advanced Western Europe and America. The most striking feature of all these lands is the fever heat at which industrialisation is being attempted. Industries in "young" states involve, however, the demand for capital on a scale such as is hardly available on the spot. Further, the question of "protection" from the economically adult nations makes the erection of tariff walls a matter of course. And herein one touches the ground of "high finance" and the problem of the compromise between foreign control and sovereignty.

OLD ORDER YIELDING PLACE TO NEW

In the third place, on a larger view, one finds that the "nationality" states which have been created or renovated as the result of the Great War represent, sociologically considered, the processes by which "Eastern Europe" is tending to bid adieu finally to the lingering vestiges of the feudal-agrarian system, the medieval economic organization and technique which disappeared in England, the U.S. France and Germany between 1750 and 1850. Nay, the achievements of the Soviet regime in Russia, the Farthest East of Europe, since 1919 constitute but the same landmarks in the great cosmic evolution from medievalism to modernism. Civilisation has been advancing from the West to the East.

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Altogether the publicists of the Indian *swaraj* movement will perhaps recognize that there is no other region to-day more significant for the development of India than the Balkans, Central-Eastern Europe, Baltic States and Russia. The problems that are being fought over and settled in these territories are identical in every way with the problems that await solution and are challenging the patriots, industrial experts and social workers of India.

EXISTING INDUSTRIES IN TCHECHOSLOVAKIA

The most industrially developed of all these states is Tchechoslovakia (old Bohemia) which lies between Germany and Austria. This republic has been enjoying its present industries as an heirloom bequeathed by the old Austro-Hungarian monarchy. It was the systematic policy of the late Hapsburg Empire to exploit the mineral and other resources of the Bohemian province virtually to the exclusion of other districts. The result is that the Tchechs and the Slovaks have been born like Minerva, so to say, fully armed with machine-factories and glass and chemical workshops of all classes. On the economic plane, Tchechoslovakia has made the *debut* almost as a new Switzerland.

ELECTRIFICATION

Electrification constitutes an important feature of Tchechoslovakia. There are 11 principal electrical works in Tchechoslovakia in which altogether 1200 million Kronen (Re 1 = 10 Kr.) have been invested. The greatest of all these concerns is the *Zentral-Elektrizitaetswerke A.G.* of Prague. It is a government enterprise to which, says the *Narodni Listy* (Prague), the republic has contributed more than 50 per cent, the province 20 per cent and the city the remainder, of the foundation capital. Electrification has been progressing at a rapid rate since the law of 1919 on the subject.

SOCIALISTIC TAXES

Tchechoslovakia presents an instance of the latest experiments in taxation. Although it is a far cry to the Russian Soviets one should not fail to notice in this republic the conquest of new ideas in regard to property.

The inheritance laws of Tchechoslovakia which have recently come in force encumber the succession with heavy dues to the state. The nearest heirs who get a legacy of from 5000 to 10 millions are to contribute 2 to 26 per cent. as taxes in addition to several other charges. The more distant heirs are to pay from 3 to 31 per cent. The furthest removed are charged with 15 to 55 per cent. In this connection one should note the British Labour Party's proposal that all income over 5000 should bear a "progressive" taxation. "Capital levy" as it is known in England, embodies the British edition of Bolshevism.

DIPLOMACY AND TRADE

Finally, Tchechoslovakia is interesting also from the standpoint of the limit of diplomatic influence on the direction of foreign trade. Although by political ties Tchechoslovakia is dependent on and now formally "allied" with France, French trade has failed to conquer ground in that land. From January to September (1913) Tchechoslovakia imported from France only $3\frac{1}{2}$ per cent of her foreign requirements and exported only $2\frac{1}{2}$ per cent of her products. But during the same period Germany took 23 per cent of Tchechoslovakian exports and contributed 42 per cent of the foreign goods demanded by her Southeastern neighbours. And yet of course Germany is hated by the new republic as its worst enemy.

INFLATION VS. DEFLATION

During the last few years two terms have been in vogue in financial circles throughout the world. These are

"inflation" and "deflation." In the attempt at answering the question as to the best currency policy for a nation the statesmen of the great powers also have been fighting over these terms.

Recently in his annual address as chairman of the Midland Bank Ltd. the Rt. Hon. R. McKenna has made the following observations: "Many people look upon any increase in the amount of money as inflation. They fail to observe the different kinds of bank loans which create additional money and denounce them all in one sweeping judgment."

It is evident that ideas are not clear even in high circles. Besides, in theory and actual practice there are all shades of statesmanship ranging from the strictest deflationism to inflationism through all the stages of "modified" inflationism. The banking and financial controversies on the continent have of late been sicklied o'er with the antagonism of interests between the public finance of the state and the capacity to compete with foreigners on the part of the large industrialists. The state needs deflation while the industries demand inflation.

DEFLATIONISM HATED BY TRADE AND INDUSTRY

The problem with all its complications has touched the Balkans, as one can understand from the German translations of the local newspapers in the *Berichte aus den Neuen Staten* (Vienna).

The amount of money in circulation in Rumania towards the end of the last year (1923) was about 30 lei (= 8 annas) per head. The scarcity of money is due to the currency policy of the finance-minister who in order to prevent the depreciation such as befell the German mark has been pursuing the policy of deflation. But importers and other merchants as well as industrialists who need credit are facing a crisis. The same policy is being

followed in Jugoslavia, another state of the "Little Entente," to which also Tchechoslovakia belongs.

Poland likewise has checked the issue of notes to a very considerable extent. The amount of money in circulation has gone down. Simultaneously has the Note-Bank greatly curtailed the granting of Credit. There is a veritable dearth of capital. The result is that the prices of shares calculated in Polish marks have not risen as high as the dollar. In fact the dollar-values of the shares in sugar, cement, machine and other industries were lower in October than in September. A curious incident,—to be explained in the present instance by the currency policy of the administration.

EXPORTS AND MONEY-MARKET

The most important item in the finances of a state is the balance of trade. To what a powerful extent the exports influence the money market has been often evident in the new states. A good harvest almost invariably means for an agricultural country, an automatic rise in the price of its money.

Bulgaria has been in a position to export 50 million kilo (1 kilo = 2 lbs) of tobacco. The transaction is valued at 4 million pounds sterling. Good harvest in other directions, for example, wheat and lentils, has also contributed to an export of 500,000 waggons. These exports have considerably raised the Lewa—the Bulgarian currency—on the exchange at Vienna.

The same history has been repeated in another state.

The rebuilding of Japan from the disasters of earthquake and fire has led to an economic activity even so far from the theatre of operations as Rumania. According to the *Journal de Geneve*, a group of Japanese financiers has placed with Rumanian timber merchants an order for half

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a milliard leis (= Rs. 1,080,000). The demand for the *lei* has consequently risen leading to an automatic appreciation on the exchanges at Paris, Zuerich and London.

THE PROBLEM OF FOREIGN CAPITAL

On the question of capital in industrialization a case is Jugoslavia. The *Deutsche Allgemeine Zeitung* of Berlin announces that the German coal and steel magnate Hugo Stinnes, who is, besides, according to a French author *le roi de la Ruhr*, the king of Ruhr, has obtained concessions from the Jugoslavian government in order to build up furnace works in Pryedor. Stinnes has been joined by some American financiers. The total capital, namely 25 million dollars, was too high to be raised in Jugoslavia itself. The interprise, however, is very important for without furnace industry the fuller exploitation of the iron mining works Ljubliana cannot be undertaken.

Poland furnishes another instance of the same problem from a slight different angle. In 1921 there were here 12 oil companies under Polish ownership and 19 under foreign. The net profit of the "native" companies was 336,940,000 Polish Marks whereas the foreign companies earned a net profit of 669,691,548 marks. The industries of this republic are evidently controlled by outsiders.

CONTROL OF EXPORT UNDER *Swaraj*

One is often asked to define *swaraj* and explain what is meant by freedom. In the interest of "national defence" as well as home requirements the government of Rumania has forbidden the export of a large number of goods. The list includes wheat, potato, linseeds, fish, poultry, fat, oil, wool, flax, cattle, skins and leathers, paper, lubricating oil, coal, timber, barrel, sugar, iron and steel, copper sulphate, coins, precious stones, pharmaceuticals, arms and ammunitions. One obtains from this schedule *en passant* an idea of what a little modern state considers to be

essential in the contemporary struggle for industrial expansion.

The control over exports constitutes a conscious item in the economic policy of free nations.

From October 1922 to September 1923 the people of Poland consumed 16,692 waggons of sugar. Per head (28 million inhabitants) the rate of consumption was 6 kilograms (12 lbs). For the next year the government has fixed the minimum of 22,000 waggons (16 lbs per head) for home consumption. Sugar is an important item in Poland's national wealth. By exporting 8000 waggons Poland obtained £ 1,459,376 and 820,000 Swiss francs (Rs. 3=5 Fr). The people of *swaraj* are masters in their own homes and can strictly define the minimum of their standard of living.

THE PUBLIC FINANCE OF YOUNG STATES

Under what conditions of material prosperity or economic self-sufficiency can or should a people be allowed to institute demands for freedom? Interesting items on the question of national finances are available from these new states.

In Yugoslavia the rate of annual taxation per head under the current budget is 850 Dinar (= Rs. 32). Of this amount only 1/8th is derived from "direct," the remainder from "indirect" taxes.

In Hungary previous to the war the national wealth per head was 2000 Kronen (Rs. 3=5 Kr.) and the national income 825 K. There has been a slight increase since then. Today, the wealth per head is 2061, and the income 430 K.

Not more than one fourth of the revenues in the budget of Poland for 1924 is to be realized from direct taxes, says the *Journee Industrielle* (Paris). The taxes

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on property constitute 23 per cent and indirect taxes about the same proportion. Customs duties are to account for 11 and stamps for 7 per cent. About 9 per cent will come from the monopolies.

Here then, we are face to face with certain experiments in public finance and state-making such as are being conducted by the statesmen of the *swarajes* born under our very eyes. Let the Indian publicists ponder over these figures and compare their own statistics. Not every free sovereign state need begin as a great and wealthy industrial power.

CHAPTER XIX

PROFESSIONAL SCHOOLS FOR WOMEN IN GERMANY

EDUCATIONAL FACILITIES FOR GERMAN WOMEN

WOMEN'S schools in Germany are of two kinds: general and professional.

In the schools of general culture the women are educated with a view to becoming *Hausfrau* (lady of the house) and mother. Civic and world problems are included in the theoretical curriculum of studies.

The professional schools, on the other hand, are intended to train the women for the "professions." The list of professions begins with house-keeping in all its minor details, and while comprising sewing, tailoring, laundry-work, cleaning and drying, reaches up to scientific and technical assistance in laboratories, clinics and workshops as well as all denominations of "social service."

There is no woman's profession, however low, for which an educational institution is not available in Germany. And in order to get employed even as maid-servant one has to produce the certificate of an appropriate school. Certificates of professional schools are

similarly necessary for the "higher" professions as well.

All these professional schools for women (*Frauenfachschulen*) must be regarded as lying outside of the *Volksschulen* (compulsory government schools) which every girl like every boy is bound to attend until the 14th year. It has to be remembered, moreover, that the universities, *Technische Hochschule*, *Handelshochschule* and other institutions of the same academic grade are open to women as much as to men.

Certain professional schools (*Gewerbliche Fachschule*) are common to both men and women. Cinema, book-binding, dentistry etc., are some of the occupations for which women are required to get the same training as men. The corresponding educational institutions are therefore not to be included in the special category of *Frauenfachschulen*.

I. TRAINING FOR HOUSEKEEPING

House keeping schools, although known under different names, may be briefly described as *Haushaltungsschulen*. The students are generally at least 14 years old, for nobody is admitted before finishing the compulsory elementary school.

II. THE SCOPE OF DOMESTIC SCIENCE

The *Haushaltungsschule* is meant for three classes of women. First are those who want to study "domestic science", as it is called in America, for their own household. Secondly, there are the women who seek careers as directrices of boarding houses, nursing homes, sanatoriums, home-schools (*Pensionate*), governesses of large households, etc. The third group consists of maid-servants, cooks, waitresses and so forth.

The courses of instruction are adapted to each group and Maidservants etc. can finish the curriculum in $\frac{1}{2}$ year.

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The curriculum for the first group, i. e. the normal syllabus for the "domestic-science"-schools of Germany, comprises $\frac{1}{2}$ year to 2 years. The same period of tuition is likewise demanded of those women, who want to function as governesses, directrices etc.

In a "domestic science" school students who wish to go through the entire course must attend 20-34 hours per week. The following subjects are covered : (1) cooking, arranging the food artistically, and serving, (2) washing, rolling, ironing. (3) taking care of house and furniture, (4) making of useful household utensils, (5) mending and repairing, (6) sewing and tailoring, (7) hygiene and sanitation, (8) attending to infants and patients, (9) gardening, and floral decorations, (10) art of living (topics of life and professions), (11) general considerations on house-keeping, (12) civics, politics and economics, (13) singing and music, (14) gymnastics.

The boarding house attached to the school serves as a regular laboratory for every lesson connected with domestic science.

Those who cannot afford to take the entire course may single out any one or more branches. Short-time special courses are thus offered in the preparation of (1) food for patients, (2) cakes and sweet meats, (3) preserved fruits and vegetables etc.

HOME VS. SCHOOL

There was a time when in Germany as elsewhere, the mothers and grand mothers, were supposed to be the depositaires of all science and art in connection with housekeeping. The home was considered to be the only training ground. A school for housekeeping was regarded as an unnecessary luxury, if not an absurdity.

But by the middle of the nineteenth century "industrialization" had advanced so far in German life that the

"traditional" experience of the mothers and grandmothers proved to be inadequate to the new conditions. The acuteness of the problem led to the establishment of *Allgemeiner Deutscher Frauenverein* (General Association of German Women) in 1865 and *Letzteverein* in 1866. Schools for domestic science began to be founded under the "patriotic" auspices of idealists.

By 1914 the states as well as the cities of the German Empire vied with one another in the upkeep of these institutions. During the war and since they have become intensely popular. Germans are to day proud of the *Haushaltungsschulen* as some more evidences of *German Kultur*.

II. TRAINING FOR THE INDUSTRIES

FOUR FEMALE INDUSTRIES

The schools for the "female industries" are likewise variously named. But they may be described as *Gewerbeschulen*. The institutions carry $\frac{1}{2}$ to 2 year course. Four industries are included among the branches of instruction. The students are allowed to take only one. The "industries" are as follows:

(1) tailoring, (2) hat-making, (3) sewing of linen goods (sheets, shirts, screens) and (4) embroidery (knitting, crochet, lace-work etc.).

Drawing and needle work, demand special attention in each. Among the subjects common to all groups may be mentioned further, (1) the study of raw materials, (2) hygiene and sanitation, (3) art of living (topics of life and professions), (4) civics, politics and economics, (5) German and (6) accounting.

APPRENTICE, GESELLIN, MEISTERIN

In order that one may be allowed to practise any one of the above four professions as *Gasellin* (i.e. passed apprentice) one must go through the entire schooling and

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obtain the necessary certificate. Besides, there is a compulsory period of practical work in certain shops authorized by the city or state. Not anybody or everybody is permitted to start a sewing or hat-making business in any city, town or village of Germany.

The *Gesellin* is a trained apprentice and must be distinguished from an ordinary apprentice (*Lehrling*). The latter does not possess the licence to practise and, even when employed somewhere, may not get any remuneration. The *Gesellin* can practise independently or, when employed by somebody, has a right to wages, the rates, generally high, being fixed by the trade associations.

But both academically and professionally the *Gesellin* is inferior to the *Meisterin* (i.e. expert). The *Gesellin* is not permitted to employ any *Lehrling* (apprentice) with or without pay. The *Meisterin*, however, has the licence to employ not only the *Lehrling* but also the *Gesellin*. The *Meisterin* and the *Gesellin* follow the same tuition only the former pursues it longer.

III. TRAINING FOR TECHNICAL ASSISTANCE

There is a number of schools or courses for women in order to train them as technical employees in scientific institutions and industrial workshops. The professions in which women may function as "*Assistentin*" may be grouped under four heads medical, metallographic, chemical, and illustrative (drawing).

(a) WOMEN AS MEDICAL ASSISTANTS

Women are employed in Germany as bacteriologists, histologists, Rontgen-operators, photographers etc. in hospitals, university-clinics, research-institutes, and private laboratories.

In order to obtain employment in those capacities the candidate must possess a certificate of 2-year schooling

in the following subjects : (1) physics, (2) chemistry, (3) anatomy, (4) physiology, (5) biology, (6) microscopical-anatomical technique, (7) parasitology, serology, (8) clinical chemistry, (9) microscopy, (10) photographic technology, (11) Röntgenology. Among the optional subjects are mentioned (1) macro-micro-and colour-photography, (2) drawing, (3) typewriting and (4) stenography.

In Jena there is a *Schule für Laborantinnen* which provides the necessary training. The *Frauenhochschule* (women's college) of Leipzig also trains up such assistants. Besides, the *Letteverein* of Berlin, offers the required courses in one of its divisions.

The examinations are held, in Prussia, by the government.

WOMEN AS METALLOGRAPHISTS

Women who seek employment as assistants in the metal-testing division of metallurgical workshops or as superintendents metallographic laboratories of mining and other factories have to produce a certificate of schooling for $2\frac{1}{2}$ years. The examination is held by the chamber of industrialists (*Handwerkskammer*).

The candidates are expected to show knowledge of (1) photography, (2) metallographic preparations, (3) microscopy, (4) chemistry, (5) physics, (6) mining, (7) metallurgy, (8) book-keeping.

The training may be obtained in one of the sections of the *Letteverein* of Berlin, and also in private schools.

(C) WOMEN AS CHEMISTS

As chemists and chemical technologists women may be employed in the examination of food, fooder and drinks as well as of other products which require official testing. Sugar-analysis, water-analysis etc. are likewise given over to women assistants.

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Only those who have completed a 2-year course in (1) chemistry with special reference to food stuffs, (2) physics, (3) anatomy and physiology of plants, (4) microscopy, (5) civics, politics and economics, (6) shorthand, (7) typewriting and (8) book-keeping are eligible for employment. The examination is held by the state. The training may be obtained at the *Letteverein* of Berlin or in private schools.

(D) WOMEN AS ILLUSTRATORS

Mechanical, electrical and civil engineers need the services of women such as are qualified in machine and other drawing. For such purposes one can obtain the training in the *Stadtische Gewerbesaal* or Municipal Industry-hall of Berlin and private school.

The following subjects are considered necessary for the equipment : (1) German, (2) Accounting, (3) mathematics, (4) physics, (5) technology, (6) descriptive mechanics, (7) projection drawing, (8) machine tools and factory installations.

One-year course is deemed sufficient.

IV. TRAINING FOR SOCIAL SERVICE

A new profession which for the present may be described as almost exclusively a female profession has made its appearance in Germany. It is known as *Wohlfahrt* or Welfare-work (social service). Women desiring careers in this business are provided with adequate equipment in certain specialized schools, called *Soziale Frauenschulen* (women's social schools).

Social service is studied exactly as any other science, art, industry or trade is studied. And students who come in for these studies come not with a view to philanthropy, charity or patriotism but as usual in other lines with a view to education such as will enable them to make a decent living.

WELFARE-SCHOOLS

There was no such school in Germany before 1889 when the first institution was founded in Berlin. The schools have grown in number during and since the war. In 1917 there was held in Berlin the first "congress of the women's social schools" in which 25 institutions took part. Of these 4 belonged to Berlin and 2 to Munich. Today in all Germany there are about 40 institutions (1925).

With the exception of one or two each one of these is a government recognized school. The first official legislation on the subject of education in welfare-work is embodied in the Act of October 22, 1920 passed by the Prussian ministry of national welfare. The other German states have followed or are following suit.

COURSES IN WELFARE-STUDIES

Welfare-schools have, generally speaking, three divisions. In one, the students make a special study of hygiene and sanitation. The second division is oriented to the training of welfare-workers for babies and children. In the third division courses are given in general and economic welfare-work.

Students are to take only one of these divisions. But there are certain subjects common to all. These are as follows : (1) general laws of health, (2) special laws of health, (3) psychology, (4) science of education, (5) problems in national education, (6) economics, (7) "social politics" and social insurance, (8) politics, law and civics, (9) theory of welfare.

The studies are both theoretical and practical. The practical work is done under proper supervision in connection with the official or private institutions of social welfare.

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The schooling covers 2 years. For theory the students have to devote altogether 600—800 hours during this period. Practical work is compulsory and demands extra hours which are adequately provided for in the school curriculum.

ENTRANCE REQUIREMENTS

In order to get admitted in a welfare-school the student must produce a certificate of secondary-school-final. Secondary schools for girls, are known as *Lyzeum*, the corresponding institutions, for boys being known as *Gymnasium* (preponderantly literary or *Real-schule* (preponderantly technical). A *Lyzeum*-passed girl cannot be younger than 18 and possesses qualifications roughly corresponding to the Indian B. A., or B. Sc., perhaps slightly lower.

CERTIFICATE OF PRACTICAL WORK

This certificate is the minimum requirement. In addition the students must produce different certificates according to one of the three courses in which they intend to specialize. Those who want to take the sanitation course, are required to produce the government certificate of "sister" or "nurse.". For the baby-welfare course the student must be provided with the government certificate of (i) Kindergarten-mistress, (ii) school-teacher in the general or technical lines, (iii) three year's continuous work in a welfare institution or (iv) study for two years in a women's school. And those who wish to study general and economic welfare have to produce the certificate of (i) teacher, or (ii) three years' practical work or (iii) study for two years in a women's school, or (iv) study in a commercial school plus one year's practical work.

In each instance the object of these special certificates is to indicate that the students seeking admission in the welfare-schools have done some special work in the

line which they choose to study. As a rule, therefore, the students who get admitted, are at least about 20 to 22 years old.

STANDARD OF PROFICIENCY

Examinations are held by the state and they are both oral and written. When the candidates pass the examination they have to spend a whole year in social service and satisfy the local authorities that they have been at work,—before they can obtain the government certificate of “welfarist” (*Wohlfahrtspflegerin*). Further, there is a condition to the effect that the candidate must not at that time be younger than 24. The standard of proficiency demanded in Germany of experts in social service would be evident from all these regulations.

ADMINISTRATION

In Breslau, Cologne, Munich and Muenster the welfare-schools are maintained by the cities. Most of the other institutions owe their origin as well as present existence to *Vereine* or associations of women whether for professional or general purposes. Certain schools are run by denominational-religious corporations, such as the Catholic women's association, at Berlin, and Munich, and the German-Evangelist women's association at Hannover, Elberfeld and Kaisersworth (Rhineland).

The most important, perhaps, of all these schools is the *Soziale Frauenschule* at Berlin (Barbarossastrasse 65) which was founded in 1905 and owes its inspiration to Miss. Dr. Gertrud Baeumer (member of the Reichstag) and Miss. Dr. Alice Salomon,¹ the present principal. The

¹ Author of one of the essays in the *Handbuch fuer das Berufs- und Fachschulwesen* (Leipzig, 1928), edited by A. Kuehne of the Prussian ministry of education, on which the present chapter is based. For the changes in the position of the German woman, both economic and political see Salomon's *Volkswirtschaftslehre* (Leipzig, 1920). The economic aspects of the women's movements are studied in detail in the *Handbuch der Frauenbewegung* (Berlin, 1901-1906) edited by Baeumer (See Vols. IV. and V.).

offices of " congress of women's social school " are located in the same building which may truly be characterized as the centre of the entire educational movement in connection with welfare-work.

CHAPTER XX

METHODOLOGY OF RESEARCH IN ECONOMICS

RECENT INDIAN ECONOMIC LITERATURE

FOR about a quarter of a century M. G. Ranade's *Essays in Indian, Economics* and R. C. Dutt's *Economic History of British India* were almost the only books by Indian authors on economic problems. It is only in recent years—during and since the Great War—that India has been seeking to have this well merited reproach wiped off.

England's Debt to India by Lajpat Rai, continuing, as it does, the Ranade-Dutt tradition, attempts to bring the story up to our own times. Fiscal policy in India has been the theme of studies by P. N. Banerjea and C.N. Vakil. The railways have arrested the attention of C. Prasad and S. C. Ghosh. In K. T. Shah's *Sixty Years of Indian Finance* and Prannath Vidyalkar's Hindi treatise on public finance, as well as in the studies on currency and exchange by K. P. Viswanathan, K. C. Mahindra and J.P. Shinghal and on banking by B. R. Rau one can notice that abstruse questions are not being evaded by Indian intellectuals.

Studies on labour questions, which form so great a part of contemporary economic literature in Europe and America, have also made their appearance. B. P. Wadia's *Labour in Madras* is local, as also R. K Das's *Hindustani Workers on the Pacific Coast*. But the latter's three brochures on labour movement, factory legislation and

factory labour embrace a historical as well as an extensive field covering, as they do, all-Indian problems.¹

The text-books used by University students such as those by V. G. Kale and J. N. Sarkar are well-known. Radhakamal Mukerjee's *Foundations of Indian Economics* and *Principles of Comparative Economics*, although they belong strictly speaking to sociology and culture-history, may also be mentioned.

It is evident that work is being done in different directions. The present list is by no means exhaustive. But in any event, on watching the publications announced or reviewed in the *American Economic Review*, (Cambridge, Mass.), *Journal des Economistes*. (Paris) or *Weltwirtschaftliches Archiv* (Kiel), one will have to despair if young India, with all its unquestionable activity in recent years along varied lines, can ever catch up to the pioneering races of the morden world.

AN OBSESSION IN ECONOMIC INVESTIGATIONS

The hopeful sign of the times consists in the fact that intellectual lethargy has been broken. Indians have begun to be in evidence. But much of the work accomplished up till now in economics is, honestly considered, juvenile. Besides, it is much too nationalistic, and at the same time not nationalistic enough.

Indian economists seem to be much too patriotic in so far as their publications are born of a nervous anxiety to combat every thesis propounded by the British "scientists" or their colleagues, the Anglo-Indian administrators. On the other hand, the economic writings of Indian authors fall much below the robust patriotic level. For they fail genuinely to visualize a world in which India functions as a mighty economic power.

¹ Reviewed by the present author for the *Weltwirts chaftliches Archiv* (Kiel, 1926).

The twofold fallacy arises naturally from India's intellectual environment, enslaved and overpowered by gigantic world-forces as it happens to be. The thoughts of Indian theorists and publicists are obsessed by Great Britain's Empire, British statesmen and British science.

Young India, although now for about two decades militant for *Swaraj*, has not succeeded in 'emancipating' itself from its over-occupation with British ideas. The excessive orientation to the imperialistic theories and policies of the alien rulers has all along been preventing India from possessing a rational grasp of the economic realities of life. Consciously or unconsciously, Indian intellectuals find themselves in scientific matters always under the incubus of a foreign body of doctrines and dogmas.

The absence of philosophical independence in India to-day was paralleled not very long ago in the United States. Students of American economic theory are aware how the "colonial" ways of thinking in literature and art as well as the British dominated mentality in economic spheres characterized the people of the United States for about two generations even after the establishment of their political independence from the "mother country". In fact, cultural colonialism survived in America down to the Civil War (1870).

The perpetual attitude of "association with and opposition to" British economic thought such as has been prevailing in India under the influence of the Indian National Congress, can hardly lead to scientific sanity. The normal growth can be expected only if Indian thinkers boldly proclaim and realize their absolute indifference to, and independence of, British science. The cultivation of a cold and calculated neutrality in regard to the British norms is the remedy that will cure

the Indian intelligentsia of its present nervousness. This will also furnish Indian investigators with the dispassion and philosophic calm which alone can be helpful in evaluating the different foreign values with reference to India's own development. The world is large enough without Great Britain. The time has come for Indian economists to seek allies among the other creative nations.

THE PROBLEM OF ECONOMIC POWER

In the second place, paradoxical as it may seem, in order to be able to think of India as an economic power it will be necessary for Indian theorists and statesmen to cultivate for some time an absolutely non-Indian atmosphere, to live and move, so to speak, in a world without India. It is under these conditions that the subjective prejudices with which the sense of the motherland invariably influences scientific investigation can be eradicated. It is only in the discussion of facts and phenomena in which India can be said to be, if at all, only remotely interested that an objective orientation is possible for Indian scholars.

In every country politicians as well as financiers, whether constructive and practical men or dreamers and idealists, are busy with the problem of carving out for their own nation its "place in the sun." The question of building up an economic power, is thus, like that of discovering the canals in the Mars, or tracing the tracks of earthquakes or manufacturing nitrogen from the atmosphere, a universal problem.

To watch these thousand and one foreign thoughts and efforts and investigate all these different approaches to one and the same truth, namely, the greatening of the Fatherland, or its expansion in extent and depth, cannot fail to initiate Indian economists to the world standard in science such as can be employed without prejudice

in every question of importance that may wait for solution at their hands. These investigations will, in reality, furnish the foundations of the science of economic power and constitute a most effective schooling in the principles of economics, theoretical and applied.

OBJECTIVE TRUTHS IN ECONOMICS

(a) RAILWAYS

In Germany both theory and practice have tended cumulatively through years to the transfer of railways to the state. Exactly the opposite is being noticed in Italy where Mussolini is ready to degovernmentalize the railways. Problems like these certainly can by no means excite Indian sympathies or antipathies in the propaganda spirit. Indian scholars can, therefore, coolly bring the white light of pure reason to bear on these questions.

(b) TARIFF

What is the "truth" regarding tariff? The answer from the United States is known in the writings of Professor Taussig. But, on the other hand, the theories of the British Cobden Club are being out-Cobdened in France where the *Societe d' Economie Politique*, the greatest French association of economists, is officially committed to the doctrine of *libre echange* (free trade). The International Congress for Free Trade has been making conquest in almost every land. Even in Germany,¹ the land of Frederick List and Schmoller, the free trade idealism or fad is being represented by the stalwards such as Brentano. The Belgian glass chemist, Henri Lambert, author of *Le Nouveau Contrat Social*, is founding a new world-order on the abolition of the restrictions to international commerce. These are the theories on customs.

¹ Free trade enthusiasm inspires the pamphlets known as *Nauumburger Briefe* by Dr. Schiele (Nauumburg, 1924).

What now is the tariff experience of mankind? Italy's customs duties are to-day in certain instances about eleven times the pre-war rates. Spain is combating foreign imports with 67 per cent *advalorem* duties. In Roumania certain native artisans and manufacturers are being provided with bounty in the form of exemption from income-tax, local rates, turn-over taxes, etc., in order to prohibit or at any rate reduce the necessity of foreign imports. The story in one form or another extends from the potash industry and merchant marine of the U. S. to British dyes as well as to the sundry interests of Great Britain which fall within the provisions of Safeguarding the Industries Act.

(c) CURRENCY LEGISLATION

On currency legislation Tchechoslovakia has recently offered an instructive case. In 1922 the crown was for some time rapidly "appreciating" in terms of foreign, for example German, Polish and Austrian money. This rise in the value of the national currency was the theme of much anti-governmental criticism among the Tchechoslovakian captains of industry and commercial heads.

For owing to the higher value of the Tchech crown, German, Polish and Austrian customers were scared away from the Tchechoslovakian markets. Germany, on the other hand, being the land of "depreciated" currency, was attracting orders not only from the neighbouring states but also from Tchechoslovakia itself. The result was that almost all the leading Tchech industries had to suffer, the textile factories being closed down for half the week, during quite a long period.

The government was, therefore, being advised to "let" the rate of exchange "alone." The effort to stabilize the currency on the part of the state was considered to be a serious blunder. To have "good" money is thus an industrial danger.

(d) INFLATION AND EXPORTS

The same phenomenon, turned inside out, has been noticeable in some of the British financial theories regarding Germany. British goods have not been selling in Germany. The German Mark is so low compared to the pound that in German estimation the prices for even cheap English goods is fabulously high. On the contrary, German goods have been flooding Great Britain as well as the markets of her colonies and dependencies. While unemployment has been raging high in the lands of good money, it is hardly noticeable in Germany (September 1923.)

How to reverse the situation? That is, how to enable Germany to buy British goods, and how to prevent German goods from competing successfully in Great Britain and in the British-dominated markets? "Friends of Germany," like Professor Keynes of London, have therefore been advising steps by which the German Mark¹ may be raised. His vituperations against the Treaty of Versailles have all along been motivated by the expansion of British commerce on the continent.

Keynes has now scientific colleagues in different lands. Professor Gustav Cassel of Stockholm, a "neutral", is one; Professor Jenks of New York and Professor-minister Nitti of Rome are others. And, under his spiritual

I A most astounding proposal has recently been made (October 1923). Parliament is said to be contemplating by "inflation" of money an artificial depreciation of British currency. The object is to combat unemployment on the one side and on the other to render the prices of goods low enough for continental (French, German, Russian, etc.) purchasers. The proposal has served already to frighten the industrialists of Switzerland, a country possessing "good" money. For, says the *National Zeitung* of Basel should the attempt be made to lower the pound by deliberate inflation, the Swiss frank will automatically rise so high that the British market will find the Swiss goods too dear and Switzerland will lose another of its valuable fields for export.

guidance a regular neo-Manchester campaign of economic liberalism has been set on foot by the *Manchester Guardian*.

But how has the German mind reacted to these "friendly" theories of scientists among neutrals and whilom enemies? In so far as their pronouncements are directed against Versailles, the German professors and publicists are shrewd enough to make *political* use of the foreign "sympathies." But in hard-headed business circles of Germany the suggestions from foreign theorists as well as from the international conferences at Washington or Genoa in regard to the raising of the Mark have been estimated as the most unfriendly and hostile measures conceivable. The industry and commerce of Germany cannot afford to have a "good" money. German industrialists and bankers have, therefore, always prayed: "God save us from our friends!"

The depreciation of the currency in terms of foreign money has to a tremendous extent been a god-send in Germany's economic life since 1919. In the first-place, every foreigner who had bought Marks with his "good" money has been compelled virtually to make a free gift of it to the German government owing to the unspeakable fall of the German currency. Secondly, this has enabled the Germans not only to exclude undesirable foreign goods from their home-land, but also to re-enter the world-market from which they were politically debarred. The rapid recovery of Germany's lost ground in the trade of India during 1921—23, notwithstanding the restrictions of Versailles, to cite an example, is a function of the fall of the Mark, or in other words, of the rise of the rupee in relation to the Mark. The relations between foreign exchange and prices often transcend the exigencies of politics,—thus affording another proof to the validity of the economic interpretation of history.

As long as German currency continues to be quoted low on the London money market, British commerce and industry will have a tremendously keen competition from the German side, and this not only in Central and South-Eastern Europe, including Turkey, but also in the Baltic States, as well as the Russian Soviets. The tendency of British economic thought, harnessed undoubtedly as it is to the development of Great Britain's economic power, will naturally consist in steadily raising the continental and Russian currencies. Germany as an industrial nation will, therefore, be always suspicious of currency theories emanating from the other side of the Channel.

(e) FOREIGN CAPITAL

In Roumania the nationalists are fighting tremendously against the importation of foreign capital. But the finance minister is abroad canvassing capitalists here and there and everyone. Foreign capital ¹ is indeed financing not only the "key industries" but also to a certain extent the administration also, of the new or renovated states of Central Europe, such as Poland, Austria and the like, as well as the rejuvenated Turkey.

(f) FEDERATIONS AN ECONOMIC NECESSITY

The old political entity known as Austria-Hungary (1914) had served also economically to introduce some sort of unification in South-eastern Europe and prevent its further "Balkanization". The disruption of Austria-Hungary in 1918 has, therefore, set not only the political but also the economic centrifugal forces in operation. But the new nationalities of these regions can hardly manage to subsist without at any rate some sort of an economic Austria-Hungary, so to speak.

1 (8) Preuss's *Kapitalanlage in Auslande* (Berlin 1928),

The attempts at "reunion" are being visible in the work of the "little Entente" of which the partners are Jukoslavia, Tchechoslovakia and Roumania. Whatever be the basis of this political federation, the economic motive is predominant. Raw materials and fuel of all kinds, as well as tariff and railway questions, are being studied between these countries almost as between districts of the same land. The racial freedom of states must not evidently be taken always to be a corollary to the material and economic self-sufficiency of the peoples, nor *vice versa*.

(g) EIGHT-HOUR DAY

No question of social economics is perhaps absorbing the world's attention more than that of the hours of labour. The eight-hour day, the slogan of humanitarian as well as scientific circles, has also been legalized in certain lands. The shortening of the hours of labour was alleged to be conducive to an increase in production. But a statistical investigation in the United States bearing on 750 works involving 580,000 hands has revealed a decrease in 68·5 per cent cases, no change in 25·6 per cent and increase only in 4·9 per cent. Even in socialist circles such as those represented by the *Sozialistische Monatshefte*, opinion is therefore gaining ground against the golden rule of the eight-hour.

(h) EXPERIMENTS IN COMMUNISM

Bolshevik Russia's experiments in antipropertyism since 1918 have proved to be failures even in the judgment of communist Napoleons. These failures are registered in the law of May 1922, which concedes the citizens the right to hold property, as well as in other laws since then in regard to banking, foreign commerce, inland trade and so forth.

On the other hand, however, the right of the state to deprive property-owners and capitalists of their rights in their own goods by "progressive" taxation of all denominations, "sequestration" of house and home etc., whenever such measures are necessary in the interest of the people's well-being has come to-day.

In Germany, for instance, no proprietor of houses is safe from the authority of the *Wohnungsamt*, the bureau of dwelling houses, a creation of the war-period, at whose dictate everybody is bound to let out rooms on rent, no matter to whom. In other words, communism prevails in German Society, as a universal and daily although silent and unobserved phenomenon.

Besides, as long as "capital levy" and cancellation, partial or complete, of national debts, continue to be discussed freely as problems of applied economics, Bolshevism has no reason to fear an atrophy.

STUDIES IN WORLD-ECONOMICS

Economic problems like these do not seriously and directly affect India,—in so far as it may at all be possible for any land really to remain unaffected by or isolated from the world-movements such as constitute *Weltwirtschaft* as defined by Professor Harms of Kiel. For this very reason these phenomena constitute the laboratory in which Indians can study the processes of economic causation with equanimity.

The discipline in methodology furnished in the economic analysis of such data cannot be expected in conditions where one cannot help taking sides.

Every foreign nation is trying to work out its own "highest good" in the economic sphere. Naturally there are parties and schools in each. In no human affair there is such a thing as Truth. There can be but truths. But

in regard to the interests involved in the present instances it should not be difficult for Indian investigators to maintain their neutrality. They may be expected to uphold their judicial impartiality in the examination of the different motives and impulses swaying, as they do, the different classes or groups of men,—bankers, industrialists, farmers, working men, politicians and theorists,—in each land.

A thoroughly fresh atmospheres, besides, furnished to Indian intellectuals in and through these studies in world-economics. Indian scholars have been compelled up till now in season and out of season to attitudinize themselves to a war of self-defence against what Europeans and Americans have to opine in the question of India's good. But in this non-Indian world, Indian economists can find rich material, as to how from day to day each of these nations is engaged, in advising itself on the best economic ideal, to be longed for and the most effective policy to be followed. Instead of having to busy themselves with what according to alien "friends" and statesmen Indians should do and should not do, it will be possible for India's investigators objectively to ascertain as to how the nations that are sovereign and self-determined actually think and proceed to work in the domain of "applied economics".

And here it were well to observe *en passant* that post-graduate students from India who come to Europe and America for training and higher work in economics would commit a most calamitous mistake if they should seek to induce their professors-in-chief to allow them to choose an Indian topic for the theme of their dissertation. Worse would it be if they should be permitted to select a theme from ancient or mediaeval India such as might involve a knowledge of certain Sanskrit or Persian texts.

When Indian themes, present or past, are chosen for the doctorate, the foreign professors invariably suspect,

that perhaps the candidates know more than themselves so far as the data are concerned. Under these conditions it is bound to be a lower and more lenient than usual standard of criticism to which the examinee will have to submit. The doctor's degree will perhaps be earned in rather too short a time and naturally will be considered by outsiders to be cheap. And humanly speaking, the candidate will return to India philosophically and technically hardly wiser than he left. A thing that is won easily is not worth winning.

The situation would be as regrettable as if certain Indian intellectuals were to come to foreign countries and present themselves only or chiefly before such countries as for one reason or another are known to be oriented, to things Asian in a friendly manner. The enthusiasm and appreciation of select circles of friends are not adapted to the honest and independent criticism of the stuff which those intellectuals might have to exhibit. But Young India has to-day advanced far enough and can dispense with the avoidance of frank judgment and open criticism.

The danger, however, of trying to shun the worlds' unhampered examination must be noted. And it deserves the attention of advanced students not only in economics but also in every Human science including archaeology, anthropology, philosophy, psychology, literature, fine arts, history and so forth. Indian post-graduate students in foreign universities should more and more deem it derogatory to suggest an Indian theme for their degree-work. On the contrary, it should be their ambition as a rule, to compete with the students of the countries which they visit, and this just in the field of which engage the investigations of the foreign comrades.

This can be assured, however, only when the Indian visitors try to contribute their own quota to the very

problems and methods whatever they be—in which the professors with whom they work happen to be interested. If, for instance, it is possible for a Frenchman or a German to write theses on Argentina or China, it should be equally possible for an Indian to write original dissertations on European and American affairs.

The themes which the professors and their seminars are engaged in working out should challenge the brains of the Indians who have been admitted as guests into these circles. The further removed the theme is from the candidate's own range of daily sentiments and prejudices, it may be moreover observed, the more adapted is to the clarification of intellect and scientific discipline. Nothing could be a better principle of guidance for anybody during the period of training and equipment for life's work.

POST-WAR APPLIED ECONOMICS

A problem of universal character in the economic region which is sure for quite a long time to regulate mankind's material interests almost as the law of gravitation is to be found in the after-math of the Great-War. It consists in the two series of phenomena known as the inter-allied war-debts on the one side and the German reparations on the other. ¹

These debts and reparations constitute in themselves in the last analysis nothing but a most stupendous transfer of goods and rights between country and county. The voluminous and intricate transactions in foreign trade which are involved in these processes are affecting every industry, bank and farming, every group of financiers, working men and business interests. Is there any economist of some standing anywhere in the two hemispheres whose scientific investigations are untouched by these problems

¹ Schumacher's *Das Problem der internationalen Kriegsschuldung* (Hanover, 1923).

of applied economics ? Surely, then, for Indian youngsters as well as veterans there could be no other problem in economics which might bring them in co-operative contact with world-thought in such a comprehensive manner and for such a long period.

Here, besides, one touches at once the English viewpoint, the French viewpoint, the American view point, the Italian viewpoint, the German viewpoint and so many other viewpoints. Then there are the politician's way of looking at the problem as well as the commercial man's way which again varies with the professions, whether the man be a banker, an industrial head or an agriculturist. Further, the labour view of the whole drama can by no means be ignored in all these interpretations.

It is in such international world-forces that Indian economists should attempt to have their mettle-ried. These world-studies, although they lie outside of the strictly Indian sphere of influence, cannot be thoughtlessly considered to be scientific luxuries or indulgences in intellectual holiday. Herein, is to be sought the solid ground-work required in the deepening of command over truth.

The example has been set by India's scholars in exact science. From the very nature of the case it is impossible to have an Indian theme in this domain. Relativity, radio-activity, ionization, sap-circulation, power-alcohol, vitamines, gland-secretion, these and other problems which Indian students of science have been attacking are universal problems. The test therefore is a world-test. All the nations of the world that are working on the same problems are submitting equally to the same test. An achievement under these conditions is, as it were, an "insured policy". It is a sound intellectual investment which can be drawn upon for scientific purposes

without fail in future emergencies and to the confidence of the entire world.

There is no more serious question for economic research in India at the present day than to tackle the problem as to how to introduce this methodology of exact science in the investigation of forces such as operate in the building up of an economic power.

CHAPTER XXI

THE STATE BANK OF SOVIET RUSSIA

INDIAN merchants are watching with interest the new developments in German currency. The Rentenbank of Berlin, based as it is on the *Renten* (interest) of the gold securities and properties of all the landed estates as well as manufacturing, commercial and banking interests of Germany, has been established on November, 15 in order to prepare a half-way house to the gold currency which is expected in the spring of the next year (1924). The two gold-banks, founded by private business firms but with Government approval, at Hamburg and Kiel, have already been issuing gold-marks which circulate within certain territorial limits.

It is just at this stage that the money and currency problems of Soviet Russia acquire an extraordinary importance. Not only the theorists of finance but men entrusted with financial administration are surprised to learn how close a parallel happenings in Germany have in the republics of the Bolsheviks. And this all the more so, when on closer investigation one discovers that, in the attempts at reconstruction, the brains of Bolshevik Russia are being followed item by item almost as a historical necessity by the statesmen of Germany. Bolshevik or bourgeois economic laws are inexorable. There are but

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limited lines of evolution along which material development can take place whether in the East or in the West.

EARLY BOLSHEVIK EXPERIMENTS IN CURRENCY

During the last two years of its existence the Imperial Bank of Russia was pursuing a systematic policy of "inflation." When the Bolsheviks took the reins of administration in 1918 they abolished the Imperial Bank as a vestige of the "old regime" and of the first or "Moderate" (Kerensky) revolution. But the same policy was continued by them, nay, carried to the term. The issue of paper ruble knew no bounds for sometime under the Sovietic government.

But the brain of Bolshevik Russia was not inactive in devising measures of financial reconstruction. Two experiments were attempted by the Soviets in 1920 and both have found imitators later, in Germany. The first was a gold loan. On its strength the Government issued interest-bearing gold bills (compare the German *Dollar-Schatzanweisung*, 1923) to the value of 20 million gold rubles. But since only larger denomination of 1000, 2500, 5000 gold rubles were in circular the measure was of hardly any value in the daily economic life of the people.

The second experiment consisted in the issue of the "rye-money", which was based on a corn-loan. The price of rye was taken to be the unit and paper money was circulated in denominations of 1 to 10 puds of rye (1 pud = 32·8 lbs.). This money proved to be comparatively stable and also quite acceptable to the peasants in villages.

THE STATE BANK

The claims of the industries run by the Government as well as of the "co-operative societies" for money and credit compelled the Bolshevik republic to devise the scheme of a central bank. In October 1921, the State

Bank of Russia was established. It was not authorized to issue notes but endowed with capital, which has been raised from time to time until by the end of 1922 it equalled 16 milliard paper rubles (bearing the stamp of the year 1922). The industries were to be provided for, with this money. But the State reserved to itself the right to issue notes for administration as well as army charges. The State Bank was further equipped with Government property to the value of 12 million gold rubles.

But as the ruble was "falling" all the time the State Bank had to change enormous rates of interest in order to finance the industries and the exports. It also demanded as security not only the goods themselves but also part of the foreign moneys which the exporters obtained against goods. For a certain time it was virtually compelled to refuse credit altogether or admit it on very limited scale.

TSCHERWONETZ = £ 1

Finally on October 11, 1922 the State Bank was endowed with the power to issue notes. But these bank-notes are to be sharply distinguished from the Government notes—the paper rubles—which constitute the only "legal tender." The bank notes issued by the State Bank are known as *Tscherwonetz* (compare the German *Rentenmark*). They must have to be covered to the extent of at least 24 per cent by gold or other precious metals, and such bills of exchange, loans or goods, as are easily realisable. There is thus a limit to the amount of *tscherwonetz* that can be issued by the State Bank. Denominations of 1, 2, up to 50 have been in circulation. One *tscherwonetz* = 10 gold rubles (1913) = Rs. 15 *i.e.* about one English pound. Its relation to paper rubles has not been fixed, so that the *tscherwonetz* fluctuates on the exchange exactly like all foreign currencies.

During the first six months of 1923 the amount of tscherwonetz in circulation was 96 millions. "Current accounts" maintained in the State Bank by the industries totalled 13 millions.

Although the legal tender still continues to be the paper-ruble (compare again Germany in 1923), the tscherwonetz has succeeded in militating against the paper money very effectively. For the first time since 1918, *i.e.*, after full five years of almost unbridled activity of the note printing press, the Soviet Government has been enabled (towards the beginning of 1923) to cry the first halt. It was decided that the maximum of paper-money to be printed every month must not exceed in value the amount of 30 million rubles.

The next step in the reform consists in the declaration that 1 paper ruble (1923), = 1 million paper rubles (1921). [Cf. 1 renten-mark (1923) = 1 billion paper mark.]

THE STOCK EXCHANGE AT MOSCOW

Another step that has facilitated the rehabilitation of Russia among the industrial nations of Central and Western Europe is the re-establishment of the Stock Exchange at Moscow on February 15, 1923. All foreign currencies have since then been quoted at Moscow thereby enabling the day to day positions of the tscherwonetz as well as of the paper-ruble on the international money market to be made known to the importers and exporter of all countries. A reliable standard for measuring the financial and economic strength of Soviet Russia has thus been set in motion.

All these years the pound or the dollar constituted the only basis of foreign transactions with Russia. But since the beginning of 1923 the tscherwonetz (the gold ruble) has succeeded in creating foreign confidence not

only in Russian currency but also in the Soviet Government itself. During the summer of 1923 although the paper ruble was continuing to depreciate, the tscherwonetz showed no signs of fall in terms of foreign monies. Rather were the pound and the dollar a few points lower than the tscherwonetz (as the August). For a certain period, indeed, these gold rubles were being covered not to the extent of the minimum 25 per cent but 40 per cent indicating an extreme precaution on the part of the State Bank authorities. It may here be pointed out also that the foreign money, securities, bills of exchange etc.. which serve to cover the tscherwonetz cannot be seized by the State Bank at its own sweet will, for they are strictly controlled by the commissariate of finance.

FOREIGN CORRESPONDENTS AND LOCAL AGENCIES

The "financial recognition" of Soviet Russia by the greater and lesser powers has followed these currency reforms automatically. The State Bank has secured some of the greatest banks of the world as correspondents. In Berlin the Deutsche Bank, the Dresdner Bank and several others, in London the Guaranty Trust Company of New York (an American institution), in Rome the Banca di Roma, in Vienna the Export Industry Bank, in Zurich the Schweizerische Bankverein,—each representing vast international credit, have been serving as the medium of transfers to and from Russia. The Vienna bankers, especially those responsible for the weekly journal of banking, *Berichte aus den neuen Statlen*, as well as the powerful industrial syndicates of Germany, for instance, the Krupp, the Borsig, the Stinnes and others are convinced that Soviet Russia is no less sound a party to deal with, than any of the "capitalistic" and non-communistic peoples.

The State Bank has its head quarters at Moscow. In order to serve the industries and trade interests of the pro-

vinces twenty-two branches have been established in the larger cities of the Soviet Federation. Besides, in September there were about 170 agencies in different localities. The whole of Russia including Siberia, Central Asia, Ukrainia and Caucasus has thus been brought into one centralized system of finance. And as the correspondents in London, Berlin, Rome, Vienna, and other cities are allowed to consummate transactions with the branches and agencies of the State Bank direct *i. e.* without going through the main office at Moscow, the remotest cities and villages in Russia have been thrown open to the world-forces in commerce, industry and banking.

CENTRALIZATION IN CURRENCY SYSTEM

With all these financial achievements of 1923 Soviet Russia is going to introduce another reform in 1924 which will unify the whole currency system of the land. Since the fall of the Czar in 1917 there have been circulating in different parts of Russia local money, of all sorts. It is only in 1922 and 1923 that the first steps were taken to remove the multiplicity by abolishing, for instance, the independent monetary systems of Turkestan, Bokhara and Khiva. But at the end of the year Trans-Caucasia continues to circulate its own currency. This is going to be abolished.

Besides, in 1924 the centralized sovereign that is to issue the money for all Russia will be described not as a *federal* authority but as the *union* of soviet republics. The replacement of the idea of federation by that of union embodies the great political fact that Russia has been able to crush all centripetal and pluralistic tendencies in administration and is going to function as a thoroughly unified, in other words, imperialized structure.

CHAPTER XXII

THE CURRENCY CRISIS IN GERMANY

EARLY in September, 1923, the English pound in Berlin was buying 200 million paper marks. In London in the middle of November it could buy 30 billions (one billion is 1000 milliards, and one milliard is 1000 millions). The paper ruble of Soviet Russia had never experienced such depths of depreciation.

The downward tendency of the German mark does not seem yet to be arrested. The excessive desire on the part of German merchants as well as citizens to provide themselves with foreign monies has led to this virtual annihilation of Germany's monetary system.

LOCAL MONIES

The *Entente* has taken advantage of the present panic in order to circulate a new currency in the occupied territories,—the Rhine—Ruhr. This may turn out to be a financial preparedness for political separation. Nay, even the cities and provinces of the German federation itself have been authorized by the central government to issue their own monies which are to circulate within well-defined boundaries. It is but in the natural course of things that Bavaria has been studying for its own jurisdiction the scheme of a "*wertbestaendiges Geld*", i. e., money as constant measure of value, in other words, a stable money.

CURRENCY SCHEMES

Theorists of currency as well as practical money-politicians in Germany are naturally utilising the crisis in order to adumbrate schemes of financial reform. One plan seriously considers the establishment of a currency based on rye. Another is discussing the advisability of withdrawing the entire paper-mark from circulation. A

third wants to deprive the government Reichsbank of the power over currency and establish a bank in gold notes under private control.

CONFISCATION OF FOREIGN MONIES

While these and other schemes are still influencing the national as well as business "economics", the government has decided to fortify the Reichsbank itself with enough capital and thus enable it to function more efficiently as the only organ of German currency. To help forward the Reichsbank an extraordinary dictatorial commissar has been appointed. He has been confiscating all foreign monies existing in the hands of the people or rather buying them off at a reasonable price in "gold mark" and hand them over to the Reichsbank.

"GERMAN DOLLARS"

In the mean time the so-called "gold mark" as an entity does not exist. It is a legalized "financial fiction", if one may coin the term, indicating on a paper a certain fixed relation such as existed between the pre-war mark and the foreign currencies. To give this fiction some sort of a reality the government has been compelled to improvise for the time being a sort of "German dollars" based on the loan in American dollars which has been subscribed to by the people towards the beginning of the year. German dollars, known as "*Dollarschatzanweisungen*", are in circulation in bills of $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, 5, and other denominations of American dollars. The rate of $\frac{1}{4}$ dollar or 25 cents being equivalent to goldmark 1.05 pfennings, the normal rate of 1913, determines the stable price of these *Schatzanweisungen*. While in regard to all foreign monies the "German dollars", or in other words, the fictional "goldmarks", are fixed, they are appreciating every day in relation with the paper marks just in

proportion as the dollar, the pound, the Swiss franc or the Dutch gulden.

An *wertbestaendiges Geld* seems at last to have been found. And Germans instead of running every day in quest of foreign monies can buy, sell, invest, or hoard in terms of a fixed currency of the German stamp. But as the amount of these "German dollars" or fictional "gold marks" is limited by that of the loan, there is a limit to the extent to which these, while functioning as standard of value, can also be employed as a medium of exchange.

THE RENTEN BANK

The currency reform movement has been going on in Germany, hand in hand with steps to reconstruction in public finance. The final phase is to be seen in a new bank in Berlin known as the Rentenbank as well as in the circulation of a new money, the Rentenmark (November 15, 1923).

In one of the recent issues of the *Neue Zurcher Zeitung* of Zurich, Dr. Justus Schoenthal, librarian of the Rentenbank has contributed an article on the law by which the bank has been brought into being. On the general currency situation with special reference to the part to be played by the Rentenmark the *Deutsche Allgemeine Zeitung* of Berlin publishes a paper from Dr. Buecher, one of the directors of the new bank. Buecher is also president of the *Reichsverband der deutschen Industrie* the "federation of German industry." It is the central organization controlling and unifying, as it does, the industrial concerns of Germany by a sort of trust in regard to all foreign activities, not only as regards market, raw materials, etc., but also in matters of taxes to be paid to the state and problems of reparation due to the allies.

NOT A GOVERNMENT INSTITUTION

The German government itself, says Dr. Buecher, was financially too weak to establish a gold note bank, or to help the Reichsbank, the official bankinghouse, re-function as such. A private bank had therefore to be established by the people. At first Dr. Helfferich's plan of a rye-bank, somewhat analogous to the corn bank of Soviet Russia, based on the value of agricultural produce, was considered to be acceptable. Helfferich was a minister under the old regime and is highly appreciated among theorists as author of treatises on money and banking. But subsequently the name was changed and his principle has been embodied in the Rentenbank.

It is founded on the *Renten*, i.e. interest of every form of property existing in Germany comprising the banks, industries and agriculture. Among its directors are to be found representatives of every economic interest that the country possesses.

The Rentenbank is by law authorized to issue not more than 3,200 million Rentenmarks on the strength of all its *Renten*. Of this 800 million, must be considered to be the reserve fund, and the rest, divided into equal shares of 1200 million, each, is to be offered as loan to the government and to the private enterprises.

It is clear, then, that the Rentenmark is not government money in the sense in which the mark coined or printed by the Reichsbank is and has been. It is a money which the state has licensed the people or the people's representatives to circulate for some temporary purposes. The German currency is thus passing through a communal transition before it can reach its final character. It should be observed further that the paper mark, (the money issued by the government, i. e. the Reichsbank) continues still to be the legal tender. The Rentenmark is

functioning legally as a standard of value, as "stable money" like the dollar, pound, gulden etc.

GOVERNMENT'S BANKRUPTCY

One notices that in the estimation of the founders of the Rentenmark as well as of the law which has constituted it the German government itself is in need of as much credit as the entire *Privat-wirtschaft* or "economic organization" of the land. And as a matter of fact, since such credit was not forthcoming to the government from private or state sources in foreign countries that Germany has been compelled to found this bank of an extraordinary character.

Owing among other reasons to the continual fall of the paper-mark the German government has for some time been actually "bankrupt". In simpler words the revenues accruing to the state through taxes, duties and so forth have not been equal to the disbursements incurred by it. However, high the "public income" in terms of paper money may have appeared to be, it was nothing compared to the high prices at which the state expenditure had to be met with falling money". "It is no secret", says Dr. Schoethal, "that the revenues suffering as they do under the financial pressure of the Treaty of Versailles and the Ruhr occupation are in their present form the furthest removed from the possibilities of covering the inconceivably high figures which the public expenditure has reached. From half official sources one can guess that the revenues do not to-day cover even one hundredth part of the expenses. The government has during the last few months been able to maintain itself solely by selling treasury bills to the Reichsbank which has issued paper money accordingly".

The Rentenbank has therefore been improvised to help the German government out of its bankruptcy,—and

this, again, curiously enough, by offering loans. The credit, however, is not by any means to exceed 1200 million Rentenmark.

LOANS TO GOVERNMENT

The loan is being given under very stringent conditions. In the first place, a part of the loan is to be devoted to clearing off some of the short period loans the government has contracted during the last few months. A sum of 300 million Rentenmark has been placed at the disposal of the government on the assurance that the whole amount be spent by it in buying back of the Reichsbank all the treasury bills it has sold, during its emergency.

The custom of selling treasury bills to the Reichsbank as a method of state borrowing is paralleled by the British government's usual practice in regard to the three-month bills sold through the Bank of England,—the practice although often prejudicial to “private” finance, has also found in recent years an imitator in the Swiss federation's relations with the *Schweizerischen National bank*.

The German government has also assured the new credit institution that it will not sell any more bills to the Reichsbank. Since the establishment of the Rentenbank a great deal of the bills has been bought back by the government, and the Reichsbank, fortified as it is with the Rentenmark furnished as purchase price, has been able to withdraw corresponding quantities of paper-money which it had issued against treasury bills. The Rentenbank has been a great prop to the Reichsbank which has been relieved of the necessity of always of having recourse to the note-printing press. A powerful curb of inflation has in this manner been available in Germany.

FINANCIAL RECONSTRUCTION

In the second place, the remaining sum of 900 million Rentenmark can be drawn by the government as

advance from the credit institution for purposes of financial reconstruction i. e., in order to make both state ends meet. This sum is available until October 1925. The Rentenbank will get an interest of 6 per cent on this loan, whereas the other loan is free of interest. The government has further to see to it that a severe retrenchment takes place in its "household". Reduction in the number officials, curtailment of salaries, high rates of taxation on the industry and commerce and raising the hours of labour without proportional raise in wages,—these and other items therefore are looming large in Germany's public finance and social economics.

CHAPTER XXIII

HIGH PRICES AND GOOD MONEY

CONSEQUENCES OF THE "STABILIZATION" OF MONEY

FROM the cheapest country in the world, Germany has grown into the dearest, and this almost over night. High prices are not new phenomena. It will be recalled that in 1921-1922 while the Austrian currency was being "stabilized" the cost of living in Austria rose far above the world-level. A parallel is to-day being furnished by the developments in Soviet Russia and Germany.

Every money has two kinds of purchasing power. One is the purchasing power at home i. e. the amount of goods it can get in exchange in the home market. The other is the purchasing power abroad, which is best seen on the foreign *Bourse*,—in the rates of exchange which the money can command in terms of other currencies.

FIRST STAGES IN INFLATION

Inflation on the scale such as was practised in Germany (as in all the countries of Central and Eastern Europe since the end of the war) could not but depreciate the currency to a tremendous extent. But the "fall" of

the German mark at home, i. e., its inland depreciation was for a long time lower than the fall abroad i. e. the foreign depreciation.

The discrepancy between these two depreciations afforded intervals during which prices of commodities in Germany remained cheap, sometimes unspeakingly cheaper than elsewhere in countries of higher money. One remembers the conditions that prevailed during the year 1922 and the first quarter of 1923.

A SUBSEQUENT STAGE IN INFLATION

But the inflation began to be more quick bringing with it a more immediate and simultaneous depreciation at home and abroad. There were to be found hardly any intervals during which one might speak of a "comparatively lower fall" in the purchasing power of the mark. The producers and storekeepers, both wholesale and retail dealers, were consequently compelled to note the depreciation abroad, in other words, the dollar or pound value of the mark in calculating and declaring the prices. While making purchases in Germany one had to pay almost the same amount in marks as would correspond to dollar or pound prices in United States or England for the same quality and quantity of goods.

FINAL STAGE IN INFLATION

But the economic consequences of inflation and depreciation have not stopped at this point which may be said to have reached in the spring of 1923. Prices began to be fixed on the *Dollarstano* i.e. the dollar, or, in other words, the gold basis of the mark. But payments were to be made and received in papermark as this was the only "legal tender." What could the business man accomplish with these heaps of paper which he got in exchange for his solid goods? By the time he was in a position to use this money for buying raw materials or

paying salaries, or so forth, the mark had fallen precipitously abroad.

The producers and with them the storekeepers had therefore no other alternative but charge *Zuschlag* (an additional rate) on every article. This additional rate, was raised from day to day, nay, from hour to hour, according to the quotations of the mark on the Stock Exchange. The prices paid by the customers came thus to bear no longer any relation to the costs of production such as are usually counted in normal times. More than fifty per cent of each price was an additional charge for the "risk" which the producer or shopkeeper was undertaking by accepting the paper-money at the sale of his goods.

The summer and autumn of 1923 have witnessed these latest effects of inflation, as registered on the price-schedule of Germany's home-market. Costs of production (in terms of the *Dollarstand* of the mark) plus risk-prices have rendered almost every commodity saleable at what may be described as "arbitrary" prices much dearer than it is in England, America, Holland, Switzerland or France, because in the matter of risk one is at liberty to calculate at one's own sweet will.

THE BEGINNINGS OF DEFLATION

The currency reform ("deflation") initiated by the *Rentenbank* established on Nov. 15, 1923 has not helped to ease the price-situation in any way. Rather, the upward tendency of price-levels has received a great fillip on account of the government's effort at "stabilizing" the mark. As long as there is no gold money in universal circulation and as long as the paper-mark continues to be the legal tender the issue of the few hundred millions of gold mark can but serve to accentuate the "*gold standard*" in the appraisal of values,

This is exactly what has been going on, on the price-market since the *Dollarstand* began to be the decisive-factor in the calculation of prices. The earlier stages of "deflation" or the first efforts at stabilizing the mark appear thus to be, economically speaking, of the same significance as the latest stages of inflation.

RICE IN RATES, SALARIES AND WAGES

The beginnings of deflation and stabilization of money in so far as their effects on the price-curve are concerned have been analyzed by Dr. Felix Pinner of Berlin in the *Neue Zürcher Zeitung*. In the first place, says he, during all this period of inflation certain prices did not rise in proportion to the fall of the money. The railway transportation, postage and such other rates over which the government had complete control have all the time been much too low, although they have risen in terms of paper-money about three times a month. In view of the gold money that is coming and the gold *standard* that has already been established the government has decided to raise all the rates.

The enhancement has taken place all on a sudden. The same sudden rise has been effected in salaries and wages also. The repercussion of the enhancements has been almost fatal to industry. The manufacturers have found themselves suddenly without enough capital to pay at the high rates and utterly unable to keep the factories running. Half-time work, concerns closing down, unemployment on the one side, and the supply of goods only at high prohibitive prices on the other are the resultant manifestations in economic life.

RISE OF PRICES OWING TO WITHDRAWAL OF PAPER-MONEY

Then again, as has been noted above, the amount of gold money in circulation, the *Dollars chatzanweisung* and

the *Rentenmark*, is very limited. All though it covers very inadequately the needs of daily transactions of the market a very considerable amount of paper-money has already been withdrawn from circulation.

A veritable scarcity of money has consequently taken place, especially since the people are perhaps disposed more to hoard the few pieces of gold money than to use them for purchases. The storekeepers are therefore automatically inclined to deliver their goods only at what they consider to be worth their while,

STABLE MONEY NOT YET LEGAL TENDER .

The currency policy of the government such as it has developed during this transition stage, is also greatly responsible for the confusion in prices. The government has forced the people to accept the paper-mark at a certain rate which is in every instance much too high compared to what it can obtain at the moment in New-York or London.

This involves a calamitous loss to the producers and dealers, especially to those who have to pay their foreign customers with foreign monies. The only way in which they can save their business from ruin is by meeting this arbitrary currency legislation or compulsory exchange rate by arbitrary "risk"—*Zuschlag* or extraordinary high prices (December 1923).

CHAPTER XXIV

THE POUND STERLING AND AMERICA

RISE OF THE RUPEE A HINDRANCE TO SWADESHI INDUSTRY

It is no longer the Russian ruble and the German mark. The "falling sickness" has attacked the pound sterling and the French franc as well.

What does the fall of the English pound mean in India? It implies that the Indian merchant in order to

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buy a pound worth of British goods pays the price not at the rate of Rs. 15 the pound but, say, at Rs. 10. In other words, on the Indian market British traders can deliver their wares at rates which would be considered very cheap in Indian estimation.

Under such conditions what can be the fate of India's *swadeshi* industry? It can hardly be possible for Indian-made goods to compete with the British. The fall of the pound, which is the same thing as the rise of the rupee, would thus be tantamount to a deathblow to the young industries such as the boycott and *swadeshi* movement seeks to protect.

FALL OF THE STERLING

The pre-war parity between the British and American currencies was indicated by the equation £ 1 = \$ 4. 82. This ratio had slowly come to be almost attained (February 1923) thanks partly to Baldwin's war-loan arrangements at Washington, D. C. But since November (1923) the tendency on the part of the sterling to sink has been in evidence. It is to be noted that the beginnings of the fall of the pound coincide with those of the stabilization of the mark. That is, just when the German goods commenced to be almost undeliverable on the world market on account of high prices estimated in terms of foreign currencies British goods began to be regarded as highly marketable commodities.

The fall in the price of currency on the stockexchange is not invariably a deplorable phenomenon. The years during which the mark was falling (1919-23) constituted the period of feverish industrial activity in Germany with a view to foreign exports. Indian imports, for instance, from Germany nearly reached the pre-war quota because German goods were considered cheap in India on account of the fall of the mark. French exports have

likewise got a fillip in recent months, as one understands from the reports in *Exportateur Francais* and *Journee Industrielle*, partly because the franc has been depreciating.

SWISS SENSITIVENESS TO FOREIGN

INFLATION

Whether the value of the currency be artificially manipulated by the money-politicians or not, the result is to a certain extent obvious. For an industrially advanced nation the fall of the currency is a stimulus to commercial conquests abroad. Little industrial states like Switzerland that live primarily on exports are therefore always sensitive to the least monetary depreciation of the lands which form their markets. And naturally they find it practically impossible to compete with the goods of low-money manufacturing nations on the world market.

INFLATIONISM IN ENGLAND ?

The English money has been falling slowly but steadily all these four months. It had been suspected at Vienna, Prague, Zurich, Milan and other Bourse centres on the continent that the British Government intended to initiate once more the war-time policy, of "inflation." Although the rumours have been officially declared to be unfounded the fact remains that the pound to-day can be bought at New York with \$ 4.28 only. Theorists like Keynes and bankers like Mc Kenna are, besides, explaining the situation in a manner which does not fail to lend colour to the view that inflationism may still be suspected to be in the air.

BRITISH PAYMENTS TO THE UNITED STATES

People have tried to explain the fall of the sterling in various ways. Late in autumn Great Britain had to make dollar payments to America against wheat purchased from

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that country. But this is a regular yearly transaction and should not bring any consequences in its train that come to stay.

Under the Baldwin agreement of 1922 Great Britain has, besides, to pay large sums in interest to the United States for the war loans. The payments involve transfers of money and consequently influence the rates of exchange. Dollars have to be bought by England, and as the demand for foreign currency rises the transactions automatically lead to a fall in the sterling.

A GENERAL RISE IN PRICES

While this item can be easily comprehended the curious phenomenon remains to be explained that the prices of almost every important commodity have risen to a nearly uniform level. One naturally ascribes this general rise of prices to the depreciation of currency. The policy of deflation which was being followed in 1921-22 had actually led to the fall of prices as theoretically it should. The developments to the contrary in price-statistics during the last few months are pointing therefore to the absence of deflation.

FINANCIAL PANIC UNDER LABOUR MINISTRY

There is another circumstance which has co-operated to bring about the sinking of the currency British. It has to be sought in the political psychol-of the people of Great Britain with reference to the Labour government. The nervousness of the moneyed classes from fear of what the labourites are likely to accomplish in the line of expropriation, progressive taxation, capital levy, cancellation of war-debts and other modes of near-Bolshevism has caused an enormous exodus of wealth.

British investors have been seeking, as might be expected, an asylum in the United States. The flight of

capital from the money-citadel of the world is a noteworthy fact of contemporary panic. America has at last cumulatively grown into a veritable Midas.

AMERICA TIRED OF GOLD

But is it possible, nay, desirable for America to swallow all this gold? The financial experts of the economic laboratory at Harvard University have been watching with no enviable anxiety the daily appreciation of the dollar in relation to the currencies not only of the Entente but also of neutral states like Switzerland.

The federal government has commenced crying "God save me from gold!" American statesmen are now engaged in studying the measures calculated to raise the European currencies on the exchange. Europe's debts to the U. S. and the problem of repayment constitute at present the core of financial politics at Washington. D. C.

The price of the pound on the exchange is a problem of the utmost importance in Indian industrial development. The swarajists of India need pay greater attention to the politics of the rate of exchange than they appear to have done up till now.

CHAPTER XXV

SNAPSHOTS OF COMMERCIAL EVOLUTION AND INDUSTRIAL GEOGRAPHY

A NEW TURN IN POST WAR ECONOMICS

THE five years (1919-1923) that have passed away since the end of the world-war have succeeded in restoring more or less settled conditions in law, politics and commercial intercourse. Business men everywhere are optimistic in regard to the current year's developments. Indian merchants also can not remain blind to the signs of the times, when such shrewd experts as Mr. W. R. Glazebrook,

chairman of the Bank of Liverpool, in his annual address before the directors declare that Europe has been making headway along the road to "sound financial principles".

India's opportunities in foreign trade have never been more inviting. German industry and commerce have now been placed on a gold basis. Small industrial powers like Switzerland and Austria are now in a position to compete with Germany's machines and chemicals on the world-market. India has now open to her the greatest chances for selection and rejection. While prices will tend to be more or less the same on account of competition between the continental, British and American goods, it is *quality* that will ultimately prevail.

COMMERCIAL DATA FOR 1924

The year 1924 has begun with new markets as well as new competitors for India. The Balkan States the Little Entente, Hungary, Bulgaria and Turkey have been setting their finances in order. Industrialisation has been proceeding apace in these lands as one can understand from the reports in the *Journee Industrielle* (Paris) perhaps not less so than in India.

And on the other side Soviet Russia is entering the world arena as no mean economic force, says a recent article in the *Daily News* (London). The *de facto* "recognition" which she had been enjoying since the Genoa Conference of 1922 has been converted into a *de jure* one by Great Britain under Ramsay-Macdonald.

Indian raw produce is going to find its market among the "great powers" severely challenged by these semi-develop lands rich as they are in agriculture and forestry. On the other hand, as market of the industrial nations for machineries and chemicals,

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India is bound to sustain a powerful competition from these "new states".

THE PROBLEM OF INDIA'S FOREIGN TRADE

Can Indian agriculturists afford to sell jute, cotton, oilseeds, manganese etc. in Europe and America at cheaper prices? Can the young Indian industries afford to buy machineries and chemicals abroad at dearer prices? No. The world-market has to be studied and if possible controlled from day to day. Business contracts under favourable conditions have to be sought here and there and everywhere.

The pressure of world-conditions is thus forcing upon Indian traders an expansion of their field of operations. It is time that representatives and agents of Indian exporters and importers make their appearance and establish their firms in every important industrial centre and port of Europe. The problem demands active interest and attention from the permanent bureaus of the Indian National Congress.

GROWTH OF FACTORIES IN AUSTRIA

The number of factories in Austria in January 1923 was 7419. In one year there has been an increase of 504. Of the newly established concerns 175 are engaged industry of all sorts including sculpture, cabinet-making, house-decoration etc. The manufacture of machineries, machine-tools, and metallic goods has been taken over by 75 works. Spinning and weaving factories are 72 in number. 41 are works given over to the production of foodstuffs. The number of new chemical industries is 36. There are 200 factories in Austria for the machine industry. The number of employees is 30,000.

While studying these figures furnished by the *Berichte aus den neuen Staaten* of Vienna, one should note that Austria has a population of about six millions, almost

the same number of inhabitants living in four or five districts of India.

ANTI-AUSTRIAN PROTECTIVE LEGISLATION

The machine-building industry of Austria Hungary had in per-war years supplied the entire Balkans, Poland as well as Italy with its products. The new Austria is now faced with laws from the "national" states, Tchechoslovakia and Hungary, which categorically forbid the importation of foreign machines. From the Italian side also the growing "national industry" has sought to exclude the Austrian goods.

PRICE-CONDITIONS

The unsatisfactory economic condition of Poland has killed its value as market. Financial crisis in Rumania and Jugoslavia has also prevented them from placing orders in Austria.

On the other hand on account of the fall of the mark German machines remained for a long time quite cheap and could easily compete with the Austrian products on foreign markets, writes the economic expert of the *Neue Freie Presse* (Vienna).

But now that price-conditions in Germany have changed, Austria's chances in the world market are turning out to be favourable. India should note, as announced in the *Deutsche Allgemeine Zeitung* of Berlin that Austrian machines are selling at rates lower than the world prices.

EXPERTS FROM SWITZERLAND

In October, says the *Neue Zuercher Zeitung* (Zuerich) the exports of watches brought Switzerland 23·4 million franks (Rs. 3=5 Fr.). The export of Swiss machineries was valued at 1·2 millions. Aluminium was exported to the

extent of 2·2 millions, apparatuses 3·6 millions, aniline dyes 5·1 millions. The price of embroideries sold abroad was 13·1 millions silk goods 8·4 millions cotton yarn 3 millions and straw goods 2·4 millions. Switzerland exports also shoes, the value of which was 2·6 millions Milk and milk products constitute as is well known, a Swiss speciality in foreign countries. These brought to Swiss industry altogether 11·7 millions. The export of Swiss chocolates was priced at 3·3 millions.

Swiss exports are thus quite varied and touch many of the lines in which the Indian consumer is interested. Switzerland although possessing not more than 4 millions inhabitants (almost the same number as people two or three districts of India) calls for a more intensive attention from Indian merchants and publicists than it has yet received.

MARKETS OF SWISS GOODS

Among special features of Swiss industry, noted in the *Journal de Geneve* it may be noted that England buys about half of the silks produced in Switzerland. In 1922 English purchases amounted to over 150 million francs. France was the greatest market for Swiss machineries having bought over 50 million worth of goods. The cotton goods of Switzerland are valued highly in the United States which buy also a lot of Swiss watches.

During the first half year of 1923 Switzerland exported abroad 5,513,25 watches of all denominations. The value of these exports amounted to 78,020,000 francs (= Rs. 46,812,000) realized from almost every nationality of the world.

GERMAN CHEMICAL STATISTICS

There are altogether 2760 chemical works in Germany which are engaged in the manufacture of dyes, alkalis,

photographic materials and pharmaceuticals. The total number of employees is 194,287 (156,315 male and 37,972 female). Of these about 30 per cent i. e. 846 concerns are located in Rhineland, employing 33,129 working men and women, as one understands from the experts of the *Verein Deutscher Ingenieure* and statisticians of the *Statistisches Reichsamt*, both of Berlin.

In the line of nitrogenous stuff and fertilizing agencies Germany possesses 304 factories in which 41,964 men and women are employed. Rhineland's share is less than 5 per cent, not more than 40 factories employing altogether 2455 persons belonging to these regions.

Explosives are manufactured in 159 workshops in which 11,442 men and 4038 women are at work. Of this number Rhineland possesses 24 establishments employing 3176 male and female workers.

THE CHEMICAL INDUSTRIES OF RHINELAND

Some of the centres of chemical industry in Rhineland or its neighbourhood may here be indicated. In Hoechst, situated on the Main, a few miles off from Frankfurt, 13,727 workers are employed in dye factories alone. There are 13 factories at Solingen, the nucleus of cutlery, which lies not far from Cologne, and in these, there are 7535 employees. Cologne is itself a great chemical centre, possessing 63 workshops with 2,444 workers. Another great place is Duesseldorf with its 41 factories in which 2210 persons are employed. At Wiesbaden there are 12 factories occupying 1395 workers.

PROGRESS IN GERMANY'S CHEMICAL EQUIPMENT

German chemical industry has been expanding steadily since 1916, the third year of the war. In 1922, the inflation year which registered the greatest boom in Germany's export trade there were often so many as

421,350 working-men employed in the chemical factories. The figure, exceptional as it is, represented about 52 per cent more activity than in the pre-war normal years.

There has been a considerable fall since then. But the progress is still remarkable. A French expert says in the *Journee Industrielle*, that the German chemical equipment has vigorously withstood the triple crisis of the defeat, the revolution and the Mark and is to-day strong enough to start on a career of world-conquest.

Some of the latest statistics show that there are 6 chemical factories in Germany each employing over 10,000 workers. Of the establishments manned by more than 1000 the number is 49, and in 52 enterprises the manpower is over 500. These figures tell their own tale.

ANGLO-GERMAN INDUSTRIAL ALLIANCE

The British Dyestuffs Corporation, the greatest manufacturing company in England for dyes and colours, has for about two years been discussing the question of entering into a pact of alliance with the association of German anilin and other chemical industries. By the terms of the pact, the *Interessengemeinschaft* (community of interests) as it is called, the B. D. & C., is in the first place, to retain the monopoly of the British market as well as a fixed percentage of the foreign and colonial markets. In the second place, the dyeing factories of Great Britain are to be helped by the representatives of German chemical industry with technical advice of all sorts such as may establish the British manufactures on a sound basis.

On the other hand the German factories are to obtain from the British manufacturers fifty per cent of the net profits on the entire trade. Germany is not to make any deliveries in dyestuffs on the reparations account. And finally German exports are to be bought exclusively by the

British Dyestuff Corporation and paid for at the normal rates.

The Government of Great Britain is the biggest shareholder in the B. D. C. Should the community of interests be finally decided upon, the great bone of contention which has all along divided England and Germany in the field of chemical industry will be removed, says the *Neue Zuercher Zeitung*, and new problems will arise in international trade.

POTASH IN ALSACE

In 1913 Alsace, then a district of Germany, produced 350,000 tons of potash. Under French management the works are being operated 100 per cent. The production has been tripled. France, whose prosperity is bound up with agriculture, is making good use of this manure, says the *Journee Industrielle*.

CANALIZATION IN CENTRAL EUROPE

Notwithstanding the development of railways and airlines the promotion of water-routes continues to be regarded as industrial and commercial necessities in Central Europe. There are three projects, as we learn from the *National Zeitung* of Basel. One is to connect the Danube with the Rhine through the Lake of Constance. The second will connect the Danube with the Neckar and the third the Danube with the Main. The Neckar and the Main are tributaries of the Rhine.

The region, known generally as Southwest Germany comprising as it does Western Bavaria, Wuerttemberg, Baden, Hessen and the Palatinate, is agriculturally one of the most fruitful and industrially one of the most developed territories in Europe. But the land is extremely mountainous and the processes of canalization will involve tremendous technical as well as financial feats.

MOVEMENTS IN OIL INDUSTRY

In New York an oil company has been floated with 20 million dollars financed by the late Hugo Stinnes, says the *Berliner Tageblatt*. German control is thereby assured of the oil in Texas, Mexico, Russia and Angola (West Africa). The Sinclair Co. of United States of America is a partner in this Stinnes concern.

In Hungary the oilrefineries can work 12,000 wagons of crude petroleum every year. Orders for raw oil have been placed in Germany. Russia has already furnished about a third of Hungarian requirements.

In 1921 there were produced in the United States 1,5 million automobiles and 147,000 motor lorries. In 1922 the corresponding figures were 2,4 million and 245,000. During the next eight months the total deliveries amounted to 2,43 million automobiles and 259,000 lorries. The rate at which automobile manufacture has been expanding has necessitated a corresponding increase in the production of oil-derivates such as are consumed in auto-machines. To keep pace the American oil industry had to speed up causing a veritable over-production, says the American correspondent of the *Deutsche Allgemeine Zeitung* (Berlin). This "glut" of oil has led to a fall in its price. While in 1914 on the London market a gallon was sold for 1 s. 7 d. to-day the price is 1, 6½ d. Oil thus happens to be one of the very few articles which are cheaper than during the pre-war year.

The French oil enterprise at Pechelbronn in Alsace are assured an activity for fifty years at the rate of 50.000 tons a year, says the *Exportateur Francais*. The total value of the beds is estimated at one milliard francs. The factories are designed not only to extract the oil, but also to refine it and manufacture essences, phosphorescent petroleum, grease, paraffine coke etc. The University

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of Strassburg has directed its attention to the special study of Alsatian Oil.

EIGHT-HOUR DAY.

The question of high prices prevailing in Switzerland is being attributed by socialists to the customs duties. But the "bourgeoisie" ascribe the higher cost of living to the diminution in production caused by the eight-hour-day which is being strictly observed in Swiss factories in accordance with the spirit and letter of the Conventions at Washington D. C.

FOREIGN CAPITAL IN RUSSIA

Altogether 59 "concessions" have been accorded to foreigners up to date by the Commissariat of trade and industry in Soviet Russia, says the *Isvestia* the semi-official daily of Moscow. Of these concessionnaires 34 per cent are German, 13 per cent British, 10 per cent French and 9 per cent American. Within the boundaries of Russia itself foreign companies have been granted the license to carry on trade, whereas for external commerce the number of foreign firms is 14. Seven parties have the concession to work in agriculture and five in timber. For the purposes of transport license has been given to 10 concerns.

CHAPTER XXVI

JAPAN SINCE THE EARTHQUAKES

THE MEANING OF FOREIGN SYMPATHY

SIGHS for the Japanese people were very audible in certain quarters in England and America during the first few weeks of the earthquake and havoc by fire. A German reporter was cynical enough to interpret these sighs in a merciless way. He threw out the shrewd suspicion that these were perhaps more the sighs of relief than of grief.

The United States, as well as Canada, Australia and Great Britain seemed to have felt relieved of a great rival, commercial and political, for some time to come. For, by one bolt from the blue, the Asian first class power, appeared to be suddenly brought down to the level of a passive on-looker in the worlds international game.

The economic disasters of the 1080 earthquakes of the last days of August (1923) were being estimated at exaggerated figures by English and American journalists. Their consequences on Japan's position as an industrial and maritime nation found the most pessimistic prophesyings in Anglosaxon lands. The wish evidently was the father to the thought.

LOSS EXAGGERATED

For four weeks the Japanese Government forbade the use of codes in telegraphic communications. Besides, until the third week of October every outgoing and incoming telegram had to be translated into Japanese before it was acceptable for delivery. While the censorship was at work controlling all news, the statistics of losses and damages began to be collected by the Earthquake Relief Bureau.

It is now well known that the great centres of industry such as Osaka, Kobe, Nagoya and so forth, have not been affected by the catastrophe at all. The Tokyo-Yokohama region, the chief centre of destructions, does not, besides, play a preponderant role in Japanese industrial life. As for commerce and navigation Yokohama used indeed to command about a third of Japan's world-enterprise. But more than 50 per cent of Japanese foreign trade passed through Kobe and Osaka.

STABILITY OF YEN

The economic backbone of Japan has been able to display its strength in no ambiguous manner. The

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panic among industrialists and financiers such as one may expect under conditions of extraordinary natural calamity seems to have been almost insignificant as objectively registered on the money markets of the world. The rate of exchange has not been much and long unfavourable and the yen(= R 1/8) has been more or less able to maintain its par. And this although unusually heavy orders have been placed for reconstruction material in foreign countries.

One reason for the virtual stabilization of the yen is that Japan had a gold reserve of about 1,340 million yens on September 1. Foreign purchases are being met from this fund, a great deal of which is held in New York City.

In the second place, economy in public expenditure, which is being noticed so prominently in Germany and France has naturally been forced upon Japan by untoward circumstances beyond human control, as they are. Economies amounting to 209,860,000 yen are in contemplation for the current year and these touch the home office and the navy most drastically. The government proposes to continue the retrenchments for a number of years.

These two factors, the reserve and the budget, have served to keep the yen sufficiently strong on the foreign exchanges.

RAW SILK DESTROYED.

In regard to industrial and commercial assets and prospects it is well to remember that Japan like Italy is poor, in any case, as regards coal and iron. Her situation in this regard remains therefore unaltered.

The export of raw silk is one of the chief factors in Japan's economic life. About 30,000 bales were lost in Yokohama, the centre of this trade. The United States which used to buy 90% of this Japanese produce have been obliged to place orders in Lyon and Milan. Japan's loss

in this direction is certainly very high since her yearly income from the export of silk amounted to about 670 million yens in 1922. But it is a temporary loss which does not affect the ensuing years. And a German correspondent of the *Deutsche Allgemeine Zeitung* says that the Japanese, have taken the speediest measures in order to keep alive the silk trade, the veritable "life-nerve of Yokohama."

LOSS IN COTTON

The second greatest industry of Japan is the spinning and weaving of cotton.

There were 4½ million spindles at work in Japan of which nearly 1 million were operated in the region of earthquakes. About 580,000 of these are estimated by Mr. F. S. Morse, the American "cotton controller" at Kobe, to be involved, only half of this number being wholly destroyed. The machines, buildings, materials, supplies of cotton, yarn and finished goods belonging to this industry account for a total loss of about 70 million yens. The expert says that the *Fuji Boseki* (with 20,000 workers, and 50,000 spindles) *Dai Nippon Boseki*, *Kancga fuchi Boseki* and other spinning and weaving factories hit by the disaster are quite strong in their capital reserves. He expects therefore that the disturbance in the cotton manufacture of Japan will be easily tided over within a very short period of time.

Not more than 30,000 bales of raw cotton (American, Indian, Egyptian, Chinese) may be taken to have been destroyed. The losses, however, are not heavy enough to influence the international cotton market.

BALANCE OF TRADE

According to the investigations of the United States Department of Commerce the exports from Japan during the first eleven months of 1923—thus including the quarter

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of a year since the disaster have totalled 1,300 million yens. There was a decrease of 179 millions over the figure of 1922. During the same period Japan has imported, 1,808 millions worth of goods, i. e. 62 millions more than in the previous year.

On the whole the balance of trade may be considered to be normal since the excess of imports over exports has been a standing phenomenon in Japan's post-war as well as pre-war economics. It may be noted, that it was only during the war years (1914-18) that Japan experienced an excess of exports over imports. The average of the five years 1909-13 showed an excess of imports by 48 millions whereas the war-period gave an average yearly excess of exports to the extent of 280 million yens.

THE FINANCE OF RECONSTRUCTION

The total loss in Tokyo is estimated at 1,463,700,000 yens. Of this sum 479,320,000 yens represent the value of 184,103 residential buildings. While temporary structures are being erected at the rate of 1,800 per day, the restoration of the city on a permanent basis has been engaging the attention of a board to which town planners, both Japanese and foreign, have laid their plans. Dr. Beard, an American expert is one of these foreigners. Another foreigner who is said to have been invited by Japanese government to help rebuilding Tokyo is the German architect Dr. Schumacher, to whom the cities of Hamburg and Cologne owe much of their present forms.

From the standpoint of buildings Yokohama has suffered more severely than Tokyo. The costs of reconstructing this port including streets, public buildings, harbours, parks, bridges etc., have been estimated to be 600 million yens.

The entire reconstruction work is to be spread over a number of years. Experts, calculate the yearly

disbursements on this account at about 150 million yens.

The fact that reconstruction expenses are to be distributed over the budgets of several years will tend to ease the public finances of severe strain, such as might otherwise burden them unduly.

IMPROVEMENTS IN FACTORY TECHNIQUE AND ORGANIZATION

In renewing the cotton factories, the proprietors are taking advantage of the latest technical improvements. The capacities for output are also being enlarged.

In regard to other restorations the tendency is to introduce amalgamation of interests wherever possible. Up till now, there were in Tokyo not more than 405 factories, which employed more than 50 workers, each while less than 50 per establishment was the rule in about 25·125 workshops. The new factories of Tokyo are going to be larger in size and smaller in number. Unification and concentration will be further promoted by the fact that the industries are to be localized in a reserved section of the new city. Large scale production bids fair to be the coming feature in Japanese industrial life.

MODERNISM IN HOUSEHOLD AND MUNICIPAL ARRANGEMENTS

The restoration experts proposed to do away with gas as much as possible. The earthquakes have demonstrated how dangerous gas can be in spreading fire if the installations are broken. Electricity is to take the place of gas. Even for domestic cooking Tokyo is going to enjoy this latest item in "modernism".

Labour-saving appliances have been much in evidence in Japan since the earthquake. Steam shovels and motor lorries are being employed on a considerable scale in the restoration work. Altogether the new Tokyo is expected

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to be more "modern" and sanitary than the one destroyed. For improving the Yokohama harbours, Japanese naval officers are visiting the Belgian, Dutch and German ports in order to take hints as regards up-to-dateness and efficiency. To a certain extent one may recall consequences of the rebuilding of London after the Great Fire of the seventeenth century.

The problem of modernizing the cities and villages has long been arresting the attention of Japanese authorities. The situation is now being attacked with great energy in a comprehensive manner. The entire economic life of Japan is witnessing a rapid transformation.

NEW MILITARY AND CIVIL ROADS

The programme of road-building, for instances, comprises 176 miles of military and grand trunk roads together with 960 miles of provincial and urban streets. For the six greatest cities Tokyo, Yokohama, Osaka, Kobe, Nagoya and Kyoto, inhabited as they are by 3 million people, the budget for roads comes up to 200 million yens.

AGRICULTURAL EXPERIMENTS IN CO-OPERATION

In this connection a word may be said about the rather new government enterprises in regard to agricultural improvement. It is not unknown that Japanese agriculture continues still to represent the type of *petite culture*. Not more than an area of 3 acres belongs to each holding. There are about 5 millions of such holdings in Japan. Of these only 30 per cent constitute the property of the cultivators.

Japanese economists have been visiting Germany in recent years, and the result is that "co-operative" system on the Rajffelsen plan is being introduced. In each of

the 45 districts, the government has established an experimental station, in order to study the possibilities of development, economic, as well as technical. Agricultural reconstruction will thus proceed hand in hand with renovations in other lines.

FRENCH APPRECIATION OF JAPAN

The rapidity with which the Japanese have been able to provide house and home, although of a temporary character, to the batches of 6800 persons who are coming back to Tokyo every day, has elicited the highest admiration of American official and non-official eye-witnesses.

The French historian of Japan, M. de la Mazeliere's tribute to Japanese character in his monumental volumes devoted to that country, is thus quite comprehensible. "Japan", says he, "is a civilizing agent in the Far-East". Her growth and expansion have therefore automatically served to cry a halt to the colonizing conquests of the Europeans, says a writer in the *Journal de Geneve*, summarizing the Paris expert's views and Japan's role in the problem of the East vs. West.

JAPANESE FRIENDSHIP DESIRED BY GERMANS

While one watches all the fiscal and economic measures of reform and reconstruction, one has no difficulty in understanding why Dr. Paul Oswald writing in the *Deutsche Allgemeine Zeitung* of Berlin, says in part as follows: "Anglo-saxons have been trying to make the world believe, that Japan is going to be reduced to a second class power. All this propaganda is nonsense. Germans must not be hoodwinked by such interpretations. It is rather lucky for Japan that the calamity has befallen her at a time when she has no pressing foreign crisis to attend to". The writer wants his countrymen to understand that Japan continues to be one of the four great powers, and suggest that the Germans now that they have

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learned enough of the world, after the sad experiences of the Great War, should make it a point to cultivate friendship with the Japanese.

BOURGEOISIE VS. WORKING-CLASS

One must not think, however, that everything is smooth sailing in the land of the Rising Sun. Japanese public life is not "cherry blossoms, cherry blossoms all the way". Even under conditions of national disaster, it is not easy for Japan to come to a unified plan of action. Japan like Germany, has been facing an "internal crisis" at every step.

It was only on January 6 that the Kiyoura cabinet came in office. But in about one month's time it has been compelled to ask the Mikado to dissolve the parliament. The "Opposition" was too tough to be bamboozled by Baron Matsui the foreign minister's reports that all was well on earth since in international relations, Japan was adhering to the pacific resolutions of the Washington Conference (1921), and that even with China some sort of friendly agreement was in the making. The ministry has found it impossible to maintain itself in view of the demands of the Opposition in regard to "home affairs."

GROWTH OF THE LABOUR PROBLEM

The present political crisis in Japan is not to be sopped down by soothing words over satisfactory relations with the foreign powers. Universal suffrage constitutes the bone of contention. In 1922 the project fell on account of the opposition of the *Sei-yukai*, the party representing industrial magnates and big land-owners. The present cabinet came forward with the same item on the agenda by which every person of the male sex above the age of 25 was to have the right to elect.¹

¹ See the Chapter on "Democracy in Japan" in *The Politics of Boundaries*.

The measure is vehemently opposed by the capitalistic and landed aristocracy, because, it will create a new constituency that of the working classes, and arm them with a new weapon, the political. Further, once universal suffrage is introduced, the "labour problem" in its entirety will make its appearance in Japanese social life. For instance the right to organize unions, the eight-hour day, the constitution of socialistic and communistic parties and such other questions of the "working class complex" as have been up till now only suppressed or prevented by police regulations and coercive legislation will have to be encountered all on a sudden. The result is feared that Japanese industry and general economic life, already incapable as they are to stand competition with the industrial powers like Great Britain, Germany and America, will be further weakened and almost paralyzed by the obstructionism of the working class.

The Kiyoura ministry assured the Parliament that steps would be taken to combat Bolshevism by all means. But this assurance was not enough to satisfy the *Seiyukai* and so a new election has been fixed for the 10th of May. The fact, however, that the recent cabinets have to discuss universal suffrage even, although but as a slow and tentative measure indicates the powerful hold that the working classes have begun to possess on some of the leading political organizations and leaders of Japan.

BOYCOTT OF JAPAN LIFTED BY CHINA

Several incidences in connection with the earthquakes have called for some comment in European journals. It is known that the year 1923 began with strained relations between China and Japan. The Chinese boycott of Japanese goods had been affecting the exports from Japan very unfavourably by the time the disasters came upon this country. But Young China has exhibited a

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wonderful magnanimity by lifting the boycott as a manifestation of sympathy for the Japanese in distress.

TREATMENT OF KOREAN NATIONALISTS

On the other hand, the Japanese people are being charged with inhuman criminality by European and American reporters. The Japanese believed that the fire catastrophe at Tokyo was due to the intentional devilishness of the Korean nationalists who took advantage of the earthquakes, to destroy as much of Japanese men and materials as possible. The vengeance of Japan on these alleged incendiaries has been perpetrated in the most ruthless manner. About 500 Koreans are reported to have been massacred by infuriated Japanese with the connivance, it is said, of the police and the army.

SOCIALISTS TERRORIZED

Further, the government has tried to sweep the city clean of socialists and other classes of Japanese interested in "dangerous thought." About 1,300 Radicals have been imprisoned by the ordinary police and 14 labour leaders are said to have been burnt alive by the military police-staff.

CHAPTER XXVII

THE NEW LAND-LAWS OF CENTRAL AND SOUTH-EASTERN EUROPE

CONFISCATION AND REDISTRIBUTION

UNDER the name of agrarian reform, Central and South-Eastern Europe has been witnessing a revolution in land laws, such as is fraught with economic and political consequences of a far-reaching character. In these Slavic states there has been going on a fundamental transformation of the landowning classes and interests. Whatever be the pretext, Bolshevistic expropriation and redistribution are being accomplished with the sacred sanction of the law-givers.

LANDOWNERS DISPOSSESSED IN
TCHECHOSLOVAKIA

According to the "*Cechoslovenska Republika*, the Tchechoslovakian government is to confiscate and redistribute altogether 39,63064 "ha." (of which 1,220,688 "ha." is agricultural) i. e. 28·2 per cent. of all the lands belonging to the territory of the republic. 1,730 land owners are going to be dispossessed of their estates, lying as they do in Bohemia, Moravia, Silesia Slovakia and the Carpathian Province. Up till 1923 only 183,913 "ha." have been redistributed. During the five years of its existence the republic has also been able to declare 70,000 "ha." of forests and meadows as state property. During the current year 180,000 "ha." of agricultural lands is in for redistribution.

Tchechoslovakia is an entirely new state which owes its origin to the dismemberment of Austria-Hungary at the hands of its enemies (1919). Its policy of confiscation is directed principally against the proprietors of the Germanic race.¹

RUMANIA'S ANTI-GERMAN LAND REFORM

With this republic are allied as members of the "Little Entente" the Kingdoms of Rumania and Yugoslavia. The land politics of these latter are following the same trend as in the former.

In Siebenbuergen and Banat, the German-inhabited provinces which the Great War has transferred from Austria-Hungary to Rumania, altogether 6,835 estates have been confiscated up till November 1923, says "*Argus*". These estates comprised, cultivated lands, pastures, hunting grounds, forests, meadows on mountain

¹ For political orientation see the chapters and sections on the Balkan complex and the Baltic States, in my *Politics of Boundaries* (Calcutta. 1925).

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sides as well as building sites and totalled 2,366,609 "Joch" (1 Joch—3½ bighas.) The distribution of these areas among new people has been proceeding slowly. The latest statistics indicate 12,078 persons and 106 rural units which have been made into new possessors. The state itself has taken possession of 10,912 Joch of cultivated lands and 2,148 Joch of forests.

DIFFICULTIES IN RECONSTRUCTION

The redistribution of lands can be accomplished in a day. But a real reconstruction is a question of time. Agricultural production has therefore been showing signs of the transitional stage in these new created holdings. German "minorities" of the province are complaining against "economic waste." The province of Benat was known in pre-war-times to be the granary of Europe. Thousands of acres are to-day said to be lying in the primitive state of uncultivated wilds. Unprovided with capital and cattle as they are, the new possessors can hardly cope with the responsibilities of bringing so vast stretches under tillage.

SERFDOM IN SLAVIC STATES

Like Rumania, Yugoslavia also has been enlarged by the Peace-treaty at the expense of the Dual Monarchy. The new land laws embody therefore the same anti-German spirit which cements the "Little Entente" together.

But one would misinterpret these redistributions and expropriations should one see in them exclusively the manifestations of revenge on the Germans (Austrians). In addition to the race or nationality question, there has ever been in these regions a real economic question, the land problem. The burning question of the redemption of lands which had been a standing social problem of the Slaves has been finding its solution in and through these new political manipulations, Bolshevistic albeit they be.

On the occasion of the abolition of serfdom the land-owners had given their "subjects" or tenants only so much land as was just enough to keep their body and soul together. Since then peasants have been able to get fresh lands on lease only on the condition of extraordinary services. The relations between the landowning and cultivating classes gradually came to such a pass that throughout Slavic Europe the latter raised the cry: "Land to him who works it."

KMETEN AND KOLONAT TENURES IN JUGOSLAVIA

The situation in Jugoslavia was marked by certain special features. The system of land-tenure obtaining in Bosnia, Herzegovina and Southern Serbia (Macedonia) was known as the "*Kmeten*." It had been prevalent in this part of the Balkans even in pre-Turkish times. On the Dalmatian sea coast the more or less similar system of "*Kolonat*" had been introduced from Italian sources. Under both of these systems the peasant paid the land-owner in kind about one-fourth to one-third, sometimes about one-half of the produce. Economic up-lift of the masses was greatly hampered by the land-systems in force. It had been sought by the Austro-Hungarian monarchy to remove this state of things.

The agrarian reforms initiated by the Hapsburgs are being continued by the Jugoslavian kingdom. The "*Kmeten*" system comprising as it did 99,000 families has been abolished. The "*Kolonat*" still obtains but large number of people under this tenure are not paying any rents. In any case the tyranny of the landowners has been removed by the solicitations of the state.

EMANCIPATION OF THE CULTIVATOR

The confiscated lands have been distributed among the people. Not more than 50 to 300 hectars (1 hectar equals $7\frac{1}{2}$ bighas) have been allowed to remain in the

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possession of the "big landowners." The expropriation has been accomplished with indemnity. The previous landowners of the Kmeten lands have together obtained from the state the sum of 255 million dinars (Re 1 is equal to 23 Di.) The amount represents the total rents such as accrued from all these lands in one year. The compensations to be paid to the "big landowners" are under discussion at the moment of writing, as a correspondent says in the *Neue Zuercher Zeitung*."

The new tenure makes over the lands to the cultivators provisionally for four years. The tenants are to pay to the state as rent for the lease eight to ten times, the net cadastral units. Of this only one-fourth belongs to the state, the remaining three-fourths are to be delivered to the previous landowners. These latter then continue formally still to be the proprietors and are burdened with taxes which are much higher in amount than what they obtain in a round-about way from their old and confiscated estates. The payments on all sides have been fully met for the period up till 1920. In the estimation of the German investigator Dr. Ludwig Fritscher the "big landowners" in the Balkans are in a miserable plight.

STATE AID TO PEASANT PROPRIETORS

The peasant has thus been emancipated from the hold of the landlord. The government has provided 180,000 families with $1\frac{1}{2}$ Joch (about $5\frac{1}{2}$ bighas) of land each. Peasant proprietorship of small sizes has thus been introduced. The lands are, however, in very many cases difficult to work and can be managed with quite liberal outlays in capital and cattle such as only "big landowners" can command. The state is therefore coming to the aid of the peasant and seeing to it that the problem of production may be well attended to, even under the conditions

of "*petite culture*" such as have been created by the redistribution of the lands.

THE POLITICS OF POLISH LAND LEGISLATION

In Yugoslavia thus the redistribution of lands is serving principally an economic end, viz. the emancipation of the cultivator. A genuine reform in the law of land-tenure has been set on foot. On the other hand, the racial i. e. political emphasis is quite patent in the expropriations in Poland, another republic which like Tchechoslovakia, has been brought into being by the enemies of the Central Powers.

The law on the redistribution of lands in Poland has for some time been before a commission of "Sejm" (Parliament.) Its provisions are peculiar. It seeks to maintain the big landed estates intact and yet at the same time create legion of small proprietorships. Both these objects are to be realized at the expense of the "minorities," especially the Germans.

In the first place the confiscation and expropriation intended by the law, are not to be carried through in an universal and absolute manner. The statute is provided with exceptions and their administration lies in the discretion of the cadastral authorities. In many instances estates as large as 400 to 1,120 hectares will remain entire provided they are possessed by proprietors of the Polish race. In Posen and West Prussia, the Western districts inhabited by Germans, the highest limits of an estate are to be 100 to 400 hectares. But in the case of German proprietors the maximum area will hardly exceed 100 hectares.

On the other hand the tendency to promote small proprietorships among the Poles is palpable in the provisions of the statute. When Poland was partitioned (c. 1772) between Russia, Prussia and Austria, the lands were distributed by these powers among their nationals at their

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own sweet will. The republic of Poland is going to dispossess all these proprietors of the White-Russian, Ukrainian and Germanic races who had acquired lands in these partition-deals. The estates that had been sole to these governments by their subjects are also to be confiscated.

THE PROBLEM OF MINORITIES IN POLAND

On the Russian side of Poland the Polish population to-day is only 20 per cent. The expropriations will thus affect the "minorities" of the eastern districts in a very serious manner. On the Western, the Prussian side the process will involve 1,000,000 hectars and 160,000 Germans.

By dispossessing the Germans and Russians of their estates, both large and small, the Poles may be said to be only undoing an injustice which had been committed against them by the previous foreign rulers. The law-givers of the new republic are remembering the facts of the great conflict which raged between the German Empire and its Polish subjects from 1886 to 1913. The "colonizing" activities of the government and landowners of Germany in Posen and West Prussia are being recalled with bitterness in the present controversy over the proposed legislation between the representatives of the German minorities and the Polish nationalist members of the "Sejm". The dispute has also reached the ears of the League of Nations.

CHAPTER XXVIII

ECONOMIC LEGISLATION IN THE SMALL HOLDINGS MOVEMENT

THE SOCIOLOGY OF SMALL HOLDINGS

ACCORDING to Professor Macgregor in *Agricultural Tribunal of Investigation* London, (1924) there is no evidence to show that small holders are either more or

less "efficient and productive" than large farmers. The support of the "small holdings" policy in England is therefore being dictated by other than economic motives.

There are considerations of national defence. Then there is the question of public health. The desirability of keeping as many families as possible down to their farms on the village and preventing the "rural exodus" is also always before the eyes of the theorists and legislators. And last but not least, there operates the expediency of raising landless labourers or other agricultural working men to the status of landed proprietors, a ground on which it is admitted that an "effective small holdings policy is a matter of social justice."

STATE INTERVENTION IN LANDED PROPERTY

The movement in favour of the creation and multiplication of small holdings embodies, in the first place, the attempts of a people to redistribute the lands that the *status quo* sanctifies as the foundations of law and order. In the second place, there is implicit in it the right of the state, nation or community to dictate the size of estates that a landholder is entitled to own or control.

Finally, one notices in these legislative tendencies the formal establishment of state-landlordism or land-nationalisation in a partial or complete manner. Small Holdings Acts, therefore are essentially communistic and Bolshevistic in spirit and form,—although no doubt in each instance the expropriations are accomplished with more or less adequate indemnity.

THE TREND OF LAND-LEGISLATION IN EUROPE

And yet economic legislation of this character cannot be described as due to the impact of the Sovietic-Russian theory and practice of November 1917. Rather, historically speaking, one should describe the New Russia's experiments in governmental land-owning or land-control as

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but the last and extremest stages in an evolution through which Europe had been passing during the previous generation. This is but another way of saying that the trend of land legislation in European countries has been more and more in the direction of what is today associated with dangerous Russia.

In England the Small Holdings Act was passed in 1908. Down to 1914 the British government spent £ 5,250,000 in order to establish 14,000 new small holders.

Denmark had preceded England in this legislation. There the Act was passed in 1899. The state advanced about £ 3,000,000 down to 1922, and 9860 small holdings were created. The laws of October 1919 have but carried the movement farther.

Still older is the legislation in Germany. The *Rentengutsgesetzgebung* or Rentland-legislation of 1890 and 1891 marks an epoch in the land-reform, agricultural reconstruction and rural reorganisation of Europe. By 1914 the German government spent £ 12,000,000 and succeeded in establishing 20,000 colonists. The movement has got a tremendous fillip under the law of 1919, which was enacted as soon as the republic was formally established.

GERMANY'S LEGAL CONTRIBUTIONS TO ECONOMIC DEVELOPMENT

In this connection it is interesting to observe, *enpassant* that some of the most vital socio-economic legislation of contemporary Europe has arisen in Germany. The *Landschaft* is an old credit Union of Prussia designed (1770) to issue land bonds on the estates mortgaged in its favour. It has furnished example and precept to the large and petty *Zamindars* of the Baltic states, Poland, Norway, Denmark, Hungary, Russia and U.S.A.

The *Raiffeisensche Darlehenskasse* (Raiffeisen system of co-operative credit) is another item which the agriculturists of the world owe to German talent, and legislation. Although the movement goes back to the fifties, the world has begun to take note of it since 1895 when the Prussian Central Cooperative State Bank was founded by the government.

Then there is the legislation on social insurance, which enacted between 1883 and 1889 has now become almost a universal stock in trade of reform movement in every progressive country.

POLITICAL ENFRANCHISEMENT OF GERMAN PEASANTS

To come back to the *Rentengut* laws. It has to be remembered that, as one understands from H. Gerdes' *Geschichte des deutschen Bauernstandes* (History of the German Peasant Class) or Haepke's *Wirtschaftsgeschichte* (Economic History) that the nineteenth century began in Germanic states with an "enslaved peasants" and a predominant *Zamindar* class.¹ It was under the inspiration of the French revolution and the philosophical liberalism preached by Kant and Fichte that the *Bauernbefreiung* (emancipation of the peasants) movement was initiated. The legislation set on foot by Stein and Hardenberg between 1807 and 1812, although well-meant, did not succeed in accomplishing much in order to improve the economic lot of the cultivators. *The interests of the Zamindars* were still kept intact.

PROTECTION OF PEASANTS

The peasants were now, however, free as "political" and "legal" persons. There were improvements in other directions. In 1821, an Act was passed by which on the

(1) See Kotzschke's *Allgemeine Wirtschaftsgeschichte des Mittelalters* (Jena, 1924) and Borchardt's *Deutsche Wirtschaftsgeschichte* (Berlin (1924)

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petition of village people *Gemeinheitsteilung* i.e. the partition of communal lands could take place. This reform has enabled the peasants each to have his own holding in one connected plot. The consolidation of cultivable and cultivated areas under single and undivided authority was thus assured.

In order to provide for the undivided inheritance of land, thus consolidated into single plots, a special legislation has been carried out so late as 1882. It is called *Anerbenrecht* (law of succession according to selected heirs). This as well as the previous measure may be described as falling within the category of *Bauernschutz* (protection of the peasants).

THE PROBLEM OF INTERNAL COLONISING

The "protection of peasants" on these lines did not involve much interference with the "vested interests". But by 1850 it had been found out that there were about 400,000 "emancipated" peasants to whom agriculture appeared hardly "paying" since their holdings were too small. The "new industries" of the day proved also to be more attractive for these more or less landless labourers than farm-work. It was under the conditions of this "industrialization" or competition between factory and farm that the Prussian *Zamindars* began to feel the want of adequate working men for their estates (C 1870).

The German government had to face the problem of having enough cultivators for the country. It was resolved to increase the peasant element in the rural centres by *Ansiedlungspolitik*, - a systematic policy of *Innere Kolonisation* (Internal colonizing or land settlement) described in Professor Sering's book on the subject (Leipzig, 1893). Thus originated the laws of 1890-91

NEW PEASANT PROPRIETORS

The peasants were not willing to take the lands or live in the villages unless they were by law enabled to feel that they were "owners" of the plots which they cultivated. Mere tenancy had no charms for them. The legislation gave them what they wanted by breaking up the large estates.

The government *Rentbanks* came to the help of the peasants, bought from the *Zamindars* the plots desired by their clients, provided them with loans for farm and buildings under the most favourable conditions and took upon themselves the responsibility of paying off the *Zamindars* with small doses of annuity in course of time. In order to prevent partition the *Anerbenrecht* has been enforced on these new peasant proprietors.

RESTRICTIONS ON PROPERTY

The legislation did not arise out of sheer philanthropy for the peasant class. Nor was it dictated out of enmity to the *Junkers*, the landowning aristocracy. But all the same, by the fiat of the state a "redistribution of property" has taken place. And it would be sheer camouflage to describe the process as an ordinary "transfer of property" such as the usual Roman law understands it.

The laws have deprived the original land-owners of much of their *freedom* both as regards the transfer as well as the indemnity. On the other hand the new peasant owners also are not privileged to sell or divide the property at their own sweet will. The *Renten-gutsgesetzgebung* of 1890-91 is really the first of its kind in modern times to have restricted the right of the individual in regard to real estate in favour of the nation.

THE LAND REFORM OF 1919

From the German achievements of 1890-1891 realized as they were in the epoch of Bismarckian absolutism, it is

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indeed a tremendous jump to the proletarian ideal of restrictions to property as embodied in the Leninism of 1917. But even in Germany how far the people are prepared to go has been evident from the law of August 1919, which, however, perhaps to a certain extent, is to be read in the light of the previous and simultaneous happenings in Russia.

ABOLITION OF FAMILY-ENTAILS

In the first place, the Republic of Germany has abolished in its entirety the system of *Fideikomnisse*. There was a tendency among the members of the new moneyed classes, the "industrial magnates" (C 1870), to found country-estates and keep large areas in the control of their families. This is no longer possible under the constitution of 1919.

THE MAGNA CHARTA OF LAND SETTLEMENT

A far-reaching law was passed the same day, August 11, on which the new constitution of Germany was issued. Under its provisions, in certain district owners of more than 875 bighas are compelled to group themselves in *Landlieferungsverbaenden* or "land transfer-unions" and to sell one-third of the cultivated area to certain government-recognized public bodies. These public bodies have been accorded the right not only of "pre-emption" but also of "expropriation". Only those who possess less than 875 bighas are not to be touched. In *Agrarwesen und Agrarpolitik* i. e. Agriculture and Agricultural Policy" (Leipzig, 1920) by Professor Wygodzinsky this law is described as embodying the *Magna Charta* of land settlement.¹

Such is the history of small holdings, associated as they are with various names *Ansiedlung* (colonising)

1. The land-question in its various aspects as well as the agricultural policy of Germany (and Austria) are historically treated with statistical data in Von Schullern's *Agrarpolitik* (Jena, 1923).

Rentengut (rent-land) or the like that has been a constant example to Denmark and that is to day inspiring the promoters of land reform in Great Britain.

WHAT IS A SMALL HOLDING ?

It is difficult exactly to define a small holding. In Denmark, the latest official experts have fixed upon 44 bighas as the minimum size. In England the standard was up till now 175 bighas. There is a tendency to raise the unit by about 25 to 30 per cent. In Germany, the holdings created by the laws of 1890-91 and 1919 have an average area of 119 bighas. In each instance the unit is considered to be small enough to be adequately cultivated by one farmer with the help of his family (and as a rule without hired labour) and at the same time large enough to maintain the family on a reasonable level of material prosperity and "mental satisfaction".

CHAPTER XXIX

THE VOCATIONAL SCHOOLS OF GERMANY¹

An Expansion in Free, Compulsory and Universal Education

WHAT IS VOCATIONAL EDUCATION ?

THE term "vocational" or "professional" as applied to educational institutions in England and America is, to say the least, very ambiguous. Not less so is the more or less corresponding term in German, the *Berufsschule*, or as it is more popularly known, the *Fortbildungsschule* (continuation school).

For, the training for priestcraft, medicine, law, politics, army, navy, theatre, school-teaching and so forth is no less a vocational or professional training than is that of

¹ Based on the *Handbuch fuer das Berufs und Fachschulwesen* edited by A. Kuehne of the Prussian Ministry of Education (Leipzig, 1928).

the girl who seeks career as maid-servant or the boy who wishes to start his life at the lowest rung in a coal mine. And of course the education that enables a person to be the head of a bank or the director of a chemical factory or the founder of an electrical engineering work-shop is equally vocational or professional. Logically speaking, then, every school and college that exists anywhere on earth is a vocational or professional institution.

But the world does not go always by logic. So it has been the tendency to reserve the term vocational or professional for particular types of schools.

TYPES OF SCHOOLS FOR WORKINGMEN

Seven classes of schools are described in Germany under the group of *Berufsschule Fortbildungsschule*.

(a) TRADE-SCHOOLS

The schools for merchants or traders (*Kaufmannische Berufsschule*) are commercial schools meant for apprentices such as are already employed in a business house. Naturally, these scholars are free enough to visit the educational institutions only during certain limited hours in the week.

In 1820 there was only one such school in Germany. In 1920 there were 850. In Prussia in 1883 the number of scholars, both male and female, was 12. In 1920, it was 94,128, of whom 42,279 were women. For entire Germany during the same year the figure was 140,000.

The school course covers 3 years. The hours range between 6 and 8 per week. The question as to whether the school-hours should be counted among the working hours has not yet been settled.

The scholars are taught the general principles of commerce, business correspondence, German composition, accounting, book-keeping, economic geography and civics.

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In commerce special attention is directed to transportation, banking and business law.

(b) INDUSTRIAL SCHOOLS

The schools for handicraftsmen (*Gewerbliche Berufsschule*) are industrial schools. These are visited as a rule for six to eight hours a week by such boys and girls under 18 as are earning their bread in some industry.

In 1910 the number of such schools in all Germany was 3,600 with a total enrollment of 5,40,000. The number of higher grade teachers was 1,500.

Three principal subjects form the curriculum of studies. First and foremost is the study of raw materials, machine-tools and appliances as well as the manufacture or construction of goods. Then comes the study of the business side of production, including knowledge of credit, banking, money, export, import, calculation of wages, prices, costs, etc. Finally, the scholars get a general idea of law, civics, sanitation, cultural institutions of the land, and last but not least, economics. The number of school-hours is in general about 8 per week.

(c) FACTORY-SCHOOLS

Factory-schools (*Werkschule*) are such technical schools of the type just described as are maintained by the great factories and workshops for the benefit of their raw recruits or young apprentices. In July 1922 there were about 95 such institutions in Germany being run by 70 concerns.

The mining and iron industries maintain 55 schools, machine industries 23, electrical industries 6, and chemical industries 2. Two schools are conducted by naval engineering firms. There is only one school in a textile factory. And so on.

There were altogether 13,738 apprentices registered in these factory-shop in 1922. The great works known as the

Maschinenfabrik Augsburg—Nurnberg of Bavaria were thus giving technical instruction to 996 scholars. The number under training at the *Siemens Schuckert Werke*, the electrical factories of Berlin, was 781. The school maintained by the engineering firm of *Borsig* (Berlin) taught 331 young men. The famous works of *Thyssen & Co.*, at Muhlheim-Ruhr were educating 816 apprentices. At the *Gutehoffnungshutte* in Oberhausen (Rhineland) 400 scholars were being taught mining and engineering. 750 men were studying shipbuilding in the school of wharf-engineering which *Messrs. Blom & Voss*, the ship architects of Hamburg, maintain for their employees.

In these and other factory schools tuition is provided for 12 hours per week. The course is completed in three or four years. The curriculum is as comprehensive as in an ordinary technical school comprising, as it does, engineering in its different branches, general science, German composition, accounting, civics, drawing, economics and culture history. Physical exercise, gymnastics, sports, etc., demand special attention on the part of the authorities.

(d) RAILWAY-SCHOOLS

The railways have their own factory-schools. These institutions are conducted in intimate connection with the railway works. Men employed in railways are naturally the students in such schools.

The railway-schools have in general two divisions. One is oriented to the technical education of the apprentice with special reference to railway engineering. The other is meant to train up the engine-drivers. In each division the number of school hours per week is 10. The course for the first division is completed in four years, that for the second in 1 year.

In the first division the scholars study civics, accounting, book-keeping, general mechanics, raw materials,

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and drawing. Physical exercises occupy two hours a week. The subjects taught in the other division comprise natural sciences, raw materials, German composition, railway management, electrical engineering, accounting, both civil and technical, as well as drawing.

Railway schools are to be found all over Prussia and Hessen at the moment of writing. About 33 per cent. of the railway-works possess a factory-school attached to them. In other provinces similar schools are being opened. The railway authorities are getting ready for 100 schools since there are altogether 100 railway workshops large and small throughout Germany.

(e) MINING SCHOOLS

The schools for miners (*Bergmann Schulen*) are factory-schools, like the railway schools, specially adapted to the requirements of young men working in the mines. The scholars are all under 18.

In Germany, as elsewhere, mining was long considered to be an occupation which anybody might be entrusted with, without special education. The proprietors of the mining companies also strongly objected to the establishment of schools for their workers. The mining schools are therefore the youngest of educational institutes for working men.

The educational work began with the government mines. The first schools for government miners were founded in Saar, the coal region which now virtually belongs to France. In 1860 there were 11 schools in Saar with 540 scholars. In 1912 the number of schools rose to 56 and that of scholars to 4,190.

The state mines of Upper Silesia founded their schools in 1905. In 1912 the number of students was 1,059.

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The state mines of Harz have not as yet provided any special schools for their workers. But those who are under 18 visit the schools existing in the locality.

The number of school hours in all these government institutes is 4 per week.

It is only so late as 1904 that the private mining companies could be induced by the government to start schools for such of their working men as had not completed their 18th year. The pioneer in this enterprise was the *Mansfeldsche Gewerkschaft*, the copper-mining company, which has its works in Harz. The company teaches 2,000 students in 70 classes distributed over 14 mining centres and supplies pencil, pen and penholder free of cost. The course is completed in 4 years.

The private mining companies of the Ruhr-Rhine region were the most obstinate in their opposition to government. But in 1914 they came to an agreement which could not be carried out owing to the war. The first schools have been founded in 1921.

In the Westphalian mining districts, *i. e.*, in the Ruhr territory the *Westfälische Berggewerkschaft*, with headquarters at Bochum, is now giving absolutely free tuition to 5,000 scholars, none above 18, in 120 schools. And on the left bank of the Rhine the schools are provided for by the *Niederrheinische Bergschulverein* of Moers. The educational appliances, such as paper, pencil etc., are supplied free of cost to the scholars, under both the auspices. The entire Ruhr-Rhine undertaking is equipping itself for 40,000 scholars.

The curriculum provides for a three-year course. There are altogether 120 hours of study per year with not more than 3 hours per week. The school hours lie outside of the working hours.

The miners study civics, economics, correspondence, mathematics, surveying, geology, natural sciences, mining, sanitation, as well as first aid. The number of hours to be devoted to each subject is fixed by law.

(f) RURAL SCHOOLS

The professional schools in the country (*Landliche Berufsschule*) are rural schools adapted to the needs of the boys and girls living in villages who are in one way or other engaged in helping their parents in agricultural work. But these are not, strictly speaking, agricultural institutions. Their character oscillates between an ordinary school and the technical-professional school of an all-round character.

The question of converting the general technical side to an exclusively agricultural one has not met with approval. But all the same, in the management of the schools, special consideration is made for the seasons, sowing and harvesting periods, etc., in regard to school hours. The subjects of study are also oriented to farming, manures, seeds, cattle, fodder, and so forth. German composition as well as civics are insisted on.

(g) SCHOOLS FOR WORKING-WOMEN

The vocational schools for girls (*Berufsschulen fur Madchen*) belong to four categories: domestic science, agricultural, commercial and industrial. The institutions are meant for young women actually employed in domestic service, farm-work, business houses or factories.

The women's schools have been in vogue only in recent times. Until 1912 there were only 10 states in Germany where compulsory domestic science schools were in operation. In the remaining 15 states the law of 1912 has attended to the need. Not before 1900 could commercial schools for women be made the subject of legislation; and not before 1912 the industrial schools.

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About 90 per cent of the young women of Germany under 18 are passing through one or other of these schools. As for the subjects studied there are slight differences between province and province. But the courses cover in general the following branches of knowledge : German, sanitation, civics, cooking, household work, needlework including dress-making, nursing and care of children, gymnastics, sports, music. The "professional" lessons comprise book-keeping, drawing, shorthand, typewriting etc., and are indeed the same as those for men described in sections (a and b). The curriculum is spread over three years with 6 to 8 hours a week.

GENERAL CHARACTERISTICS OF VOCATIONAL SCHOOLS

Several features are common to these vocational schools. In the first place the scholars are working men and women who earn their livelihood by service of one sort or another.

In the second place, the institutions are meant for persons who are under 18 and are generally above 14.

Thirdly, whatever the subjects studied, three courses are almost universal. First, the students must have physical exercise, gymnastics, sports excursions, etc. Secondly, they must study civics, which implies not only the knowledge of general economic, political and legal conditions, but also the study of cultural institutions of the country, such as museums, galleries, theatres, exhibitions, zoological gardens, scientific discoveries, etc. Finally, a course in German is compulsory. The students are taught to express their ideas precisely in a written form.

These are the various agencies through which the peasants, working men, as well as the lower middle classes of Germany, are being educated not only to become

efficient hands and feet of German economic life, but also to grow up into able-bodied and patriotic citizens for the "Fatherland".

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All these schools form integral parts of the compulsory free and universal system of education which is categorically provided for in Art. 145 of the constitution of the German Republic. The article is thus worded :

"The compulsion (*Schulpflicht*) to attend school is universal. It is realised through the elementary school (*Volksschule*) which consists of at least 8 one-year classes and the following *Fortbildungsschule* which carries the scholars up to the end of the 18th year. In both these schools the teaching and educational appliances are provided free."

In other words, every young man or woman under the age of 18 (with one or two specified exceptions), no matter where located nor how employed, must attend a school. It is not enough that the boy or the girl has finished the 8-year course in an elementary public school.

Strictly speaking then, one may say, that the *Fortbildungsschule* is really a "continuation school." And since between the ages of 14 and 18 the great majority of the population belongs already to the class of workingmen employed in some firm or factory, the continuation school is for all practical purposes a *Berufsschule* (vocational school) or an institution for the technical and higher training of employees.

By law these schools, free as they are, have to be provided for by the industrial guilds, unions of artisans, chambers of commerce, trading corporations and such other economic establishments. The state, the city and the local government are also responsible for the founding of such institutions wherever necessary.

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The tendency is to treat *Berufsschule* more from the standpoint of their economic significance for the country than from that of their character as educational institutions. The inspection and legal control are vested, therefore, chiefly in the provincial ministries of commerce, industry, forestry and agriculture and only to a very small extent in the ministries of education, science and art.

CHAPTER XXX

THE BACKBONE OF INDUSTRIAL GERMANY 1

THE industrialization of Germany as that of other countries has been brought about by many factors. As a rule, outsiders cast their eyes on the *Technische Hochschulen* (technical "high schools" or colleges), which academically and socially enjoy the rank of universities, as the chief if not the sole spiritual sources of Germany's industrial might.

On an intensive examination, however, one should be inclined to revise one's impressions and judgments. One discovers that Germany is a veritable jungle of industrial, professional and other institutions. Their name is legion and they are bewilderingly complex.

It is this vast number of technical schools of all denominations, distributed as they are in every nook and corner of Germany that has democratized inventions, discoveries, industrial skill, practical experience and scientific knowledge among the masses of the German population. The backbone of industrial Germany is built up on the nurture furnished by these schools, which although bearing the modest name of a mere *Schule* (i. e. a school as contrasted with a "high" school) have not failed to maintain a standard of tuition sufficiently high, such as

1 Based on the *Handbuch fuer das Berufs und Fachschulwesen* edited by A. Kuehne (Leipzig, 1929).

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may enable the scholars to take charge of factories and workshops as responsible *Fachmaenner* or experts.

“ Industrial research ” is a problem for which perhaps in most cases the best equipment can be secured in a *Technische Hochschule*. In order to equip oneself, further, as teacher of industries for a technical institution one generally provides oneself with the training and discipline such as are available in a *Technische Hochschule*. But those whose chief interest lies in the building up of factories and workshops find their aims invariably best served in such technical schools as are known as *Fachschulen* (subjects-schools).

India has just begun to discover Germany for herself. The importance of the German *Fachschule* is gradually dawning upon the consciousness of Indian industrial travellers and students.

1. SCHOOLS OF ARCHITECTURE

The first German school for architecture (*Bauwerkschule*) was established at Munich in 1820. Today there are 60 schools throughout Germany. In winter 1920-21, the number of students was 12,730. The institutions at Karlsruhe in Baden, Stuttgart in Wurttemberg, Holzminden in Braunschweig, and Breslau in Silesia have long attracted the largest number of scholars and are therefore famous in the profession of builders.

These schools are official institutions run by the State itself or by the city. The course covers 2½ years consisting of altogether 100 weeks. Each semester or half-year has 20 weeks. The curriculum is finished in five successive stages. The number of school hours is 44 per week.

In order to be admitted, the candidate must pass a preliminary examination. At least one year's practical work as apprentice to an architect is generally demanded

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as admission requirement. Foreigners are admissible on payment of the regular fee which is 3 to 5 times that charged of the Germans.

The students leave the school with certificates in *Hochbau* (overground architecture) or *Tiefbau* (underground architecture). But during the first two semesters every student covers the same ground. The common courses include German, business, civics, arithmetic, algebra, geometry, natural science, building materials, projection, statics, construction of buildings, designing, architecture, modelling, freehand-drawing, and valuation.

In the higher classes surveying is common to both the divisions. Plan-making is special to *Hochbau*. Embankments, roadmaking, water-works, bridges, underground constructions, railroad-mechanics, reinforced concrete, iron works, and railway buildings are the special subjects for students of *Tiefbau*.

2. SCHOOLS OF METAL INDUSTRY

Most varied in character are the schools of metal industry (*Metallfachschule*). Two main classes may be pointed out. First, those that impart education in engines, machine-tools, electro-technology, naval machines, agricultural and other machineries. Secondly, those that teach the locksmith's craft, the various smithies in copper, iron, etc., the tin-man's trade, installations of all sorts, smaller iron industries, and so forth. This latter group of schools is widely distributed throughout Germany.

The first group of schools occupies a prominent place in German industrial and economic life under the general name of schools of machine-building (*Maschinenbauschule*). These may be more conveniently described as schools of mechanical engineering. These institutions are mostly run by the State or the city. There are a few conducted by private enterprise.

The government schools are of two grades—lower and higher. The lower school of mechanical engineering admits students with the “elementary free public school” (*Volksschule*) certificate, provided they have afterwards worked in factories for at least 4 years. In the higher school only those students can get admission who in addition to the *Volksschule* possess the middle school qualification together with factory experience of 2 years.

The students must be at least 17 or 18 years old. As a rule, they are between 20 and 30.

There is no difference in curriculum between the two grades of schools. Only, in the lower grade the theoretical and scientific aspects of each problem are as a rule overlooked. The difference lies essentially in the method of teaching and the selection of topics in each subject.

The lower school curriculum is, besides, finished in 4 semesters or 2 years, while the higher in 5 semesters.

The number of school hours is 40-42 per week.

The students have to take German, business, civics, mathematics, physics, chemistry, projection, technical freehand drawing, mechanics, machines, motors, levers and pulleys, electro-technology, architecture, general technology, accidents, first help and industrial hygiene. Laboratory practice is compulsory. The number of exercises which the students themselves have to work out per semester is fixed. Not more than 20-30 students are admitted in each class in order that personal attention of the teacher may be assured to each.

There are altogether 35 government schools. In Prussia there are 11 higher schools and 13 lower schools. In Bavaria there are 2 schools (at Nuremberg and Wuerzburg), both higher.

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At Chemnitz in Saxony there are 2 higher schools, one of which has a division for textile engineering. The other school in Saxony, also higher, is located at Leipzig.

There are higher schools in Wurttemberg, Baden, Hessen and Oldenburg, one in each. The higher schools at Hamburg and Bremen have divisions for shipbuilding.

Students have to pay fees and buy their appliances. The educational institutions are equipped with costly collections of machines and implements. The students are allowed to operate and examine them in working order.

3. SCHOOLS OF MANUFACTURE

These schools of mechanical engineering, oriented as they are chiefly to the machines and the tools employed in industry, belong, technically speaking, to the group of *Konstruktionsschule* (school of construction). They are sharply to be distinguished from another group which train the students more for the manufacturing than for the engineering side of industry. These latter are therefore described as *Fabrikationsschule* (schools of manufacture.) The more generic name for such institutions is *Betriebsfachschnle*.

There is only one school of manufacture in Germany and it is maintained by the city of Berlin. Another is being provided for in the same city. In Bavaria Nuernberg will shortly have one. A fourth institution of the kind is in contemplation under the auspices of the government of Prussia.

At least three years' practical work in factories after elementary public school course is the pre-condition for admission. The curriculum is finished in two years. The teachers are either engineers actually employed in industrial work or such persons as are from time to time deput-

ed by the school authorities to acquire experience in industries.

The subjects taught in the schools of manufacture are to a certain extent common to those in the lower and higher schools of mechanical engineering. The emphasis on each subject differs with the institutions.

There are five general groups in which the subjects may be divided : (1) mathematics, physics, mechanics, theory of solids, etc (2) elements of machines, (3) motors, levers, pulleys, etc., (4) electro-technology, (5) technology.

In the higher schools of mechanical engineering, the most important subject is included in group (3), i. e., motors, levers, pulleys etc., whereas in the schools of manufacture this is not an important branch of study at all.

The essential subject in these latter is technology which implies all that is included in manufacture. In the higher schools of mechanical engineering not more than 500 hours are devoted to 'technology' during the entire course, whereas this subject commands as many as 1800 hours in the *Betriebsfachschule*.

The technological or manufacturing subjects comprise raw materials, measuring instruments and machine-tools, the chemistry of manufacture, foundry work, smithy dyeing installation of workshops, management of factories and book-keeping.

4. SCHOOLS OF SPINNING AND WEAVING

In ante-mechanical days the first spinning schools were established towards the end of the eighteenth century in order to train workingmen for handspinning. But by the middle of the nineteenth century, all these went out of use owing to the introduction of machinery in textile industry.

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Until about 1830-40, however, Germans used to visit Lyon in France, in order to study modern textile engineering. It was during this period that the first spinning and weaving schools adapted to the new industries began to be founded in Germany,—both by private as well as government efforts.

The first modern weaving school of Germany was established at Reichenbach in Saxony in 1830. And in Prussia the first institution came into existence at Elberfeld (Rhineland) in 1845. Both these schools are still in existence and possess a universal reputation. The school at Reichenbach happens, besides, to be the only institution where carded yarn and worsted spinning are taught.

Textile in one or all of its branches is now taught in dozens of institutions in Germany. Most of these are conducted by the state or the city, a few by private enterprise.

Of the schools in Prussia the one at Elberfeld, Milheim, Krefeld and Berlin are the most noted. In Saxony the most influential is the institution at Chemnitz. Munchberg and Lambrecht in Bavaria and Reutlingen in Wurttemberg are of like importance to textile students.

The Prussian textile schools are highly specialized. Krefeld, for instance, is visited chiefly for silk and velvet, Barmen for strong threads and Berlin for dress-making. Then there are the institutions which specialize in the teaching of spinning and weaving in wool, cotton, linen, ribbon, lace and other stuff respectively.

The schools are of two grades. In the lower the *Webeschule* (weaving school), the object is to train up working men for the spinning and weaving factories. The object of the *Hoehere Webeschule* (higher weaving school) is to equip prospective directors and managers of these

industries with the technical and scientific knowledge. These latter are provided with departments of spinning, weaving, dyeing, finishing, and in certain instances, with that of the manufacture of ready-made dress.

Among the Prussian institutions must be mentioned the one in Silesia which provide people with training in handweaving as well as teach machine-weaving to the handweavers. In Hanover handweaving is still practised by the rural women in winter months. There are institutions in this district, known as *Webereilehrwerkstaetten*, which serve the educational needs of such people.

The commercial side of the textile industry is taught in certain schools. In this course the object is to make the students experts in the examination of the goods.

Chemnitz, the Manchester of Germany, is visited naturally for its many-sided *Textilefachschule* equipped as it is with all possible branches. It is besides acquiring a special value because of its division of mechanical engineering or a machine technology which as a rule, is overlooked in ordinary textile schools. There is, further, a division for the training of textile school teachers.

The school at Reutlingen described as a *Technikum*, is no less important than the one at Chemnitz. Not only spinning, weaving and dyeing are here taken care of, but textile chemistry as well as textile technology receive special attention. Although originally intended for cotton industry, the school has grown up into an institution for the training of textile engineers in other goods as well.

5. SCHOOLS OF INDUSTRIAL ARTS AND HANDICRAFTS

Each and one of the arts and crafts has its special schools in Germany ; and where it is not possible to institute a full school, certain classes in the schools or

museums are devoted to the subject. These arts and crafts schools known generally as *Kunstgewerbe und Handwerkschule* are mostly run by the State or the city. There are quite a large number conducted by private persons.

In these institutions the training of taste is provided for the representatives of every industry. Accordingly there are separate classes for carpenters and manufacturers of furniture, house-decorators, painters, modellers, sculptors in wood and stone, woodcarvers, metal-workers, die-cutters, blacksmiths silver- and goldsmiths, enamel workers, designers, painters of advertisements, printers and compositors, bookbinders, glass-painters, glass-cutters, and porcelain artists. For women there are special classes in weaving, knitting, needle-work, embroidery of all sorts, clothing fashions and garment-making.

In each school the studies are oriented to three directions. First, there is the artistic aspect of every craft. And for this the scholars have to take general drawing, calligraphy, drawing of plants and animals, nature study and water colour painting. Secondly, there is the technical or manufacturing aspect. The corresponding studies are construction, details of the special subject, and raw materials. Finally, there are courses in book-keeping, calculation of costs, industrial legislation, and civic.

The scholars must be at least 17 years old and must have practical experience in the crafts. Foreigners are admitted on payment of five times the fees charged of the natives. The schools are visited not only by young men and women who seek a full training which lasts often about 4 years and generally 2½ years, but also by elderly people who come in for certain courses in order to learn something new for their crafts as well as by artisans who, while employed as assistants in some studies, seek to advance their knowledge by attending evening classes.

These schools owe their origin to the inspiration derived from the London Exhibition of 1851 and the example set by the South Kensington school which was established as a result of that exhibition in order to educate public taste. The first school on the Continent was founded at Vienna and was followed by the institutions at Munich, Karlsruhe, Nuernberg, Dresden, Leipzig and Berlin.

For the first three or four decades the object of the schools was focussed on the rediscovery and popularising of anicient styles. During the last decade of the nineteenth century the craze for the antique began to be replaced by the demand for "modern" art. This modernism in taste has been triumphant in arts and crafts as well as in the schools for these subjects since the Exhibition at Dresden in 1906.

At present there are 85 schools of this class under State or city management in the different provinces of Germany. Of these 5 belong to Saxony, 22 to Bavaria and 40 to Prussia.

Of the schools in Bavaria two only are encyclopaedic in character. The others are devoted to special subjects such as woodcarving, ceramics, photography, manufacture of musical instruments, embroidery, lace-work, etc. Similarly there are 12 "special subjects" schools in Prussia in which bookbinding, bronze-work, cutlery manufacture, and other crafts are taught. There are printing schools in Saxony.

The manufacture of toys is taught in some of the schools of Saxony as well as of Thuringen. Work in gold and silver constitutes the *Fach*, i.e., the speciality, of certain schools in Baden, Wurttemberg, and Prussia. Ivory work can be studied in a school in Hessen.

6. SCHOOLS OF MINING

The oldest of "modern industries" is mining, (*Bergbau*), and so mining-schools (*Berg-schulen*) belong to the oldest group of technical schools in the epoch of industrialism.

The first institutions were established at Freiberg (1800), Clausthal (1811), Bochum (1816), Eisleben (1817), Siegen and Saarbruecken (1818).

The school at Saarbruecken is the only institution maintained by the state. But under the Versailles Treaty the Saar Valley belongs practically to France for 15 years.

Today there are altogether 11 schools in Prussia and only one (Freiberg) in Saxony. The most prominent in point of attendance are the following (all located of course in the mining centres) :

(1) Bochum in Westphalia (Ruhr) with 766 pupils
(2) Easen (Ruhr) with 264, (3) Tarnowitz in Upper Silesia with 130, (4) Eisleben with 130, (5) Aachen with 87, (6) Hamborn (Ruhr) with 80, and (7) Clausthal with 72. There were altogether 1759 scholars in the Prussian schools in 1924.

All these schools are maintained by the local mining associations (*Verein*). But the state has the right to supervision. And in any event the managing board is by law (1921) compelled to consist of representatives of the working men, parents of the pupils, and teachers in addition to those of the proprietors and employers.

The object of the *Bergschulen* is to turn out technical officials, engineers, etc., for the mines. Anthracite mining is the exclusive feature of the schools at Bochum, Essen, Aachen, Hamborn and Tarnowitz. The ground covered in the schools at Eisleben, Clausthal etc., is more comprehensive. The mining of brown coal, salt, ores (iron,

and other metals) as well slates is taught, in these latter institutions.

The schooling comprises generally 2 years at the rate of 30 hours per week on the average. Students are generally 20 years old. They are expected to show on admission a record of practical work in the mines extending over 3 or 4 years. As a rule, no student comes to the school before having passed 6 or 7 years as a miner.

At Bochum—the anthracite centre—the following subjects are included in the curriculum of studies: (1) German, (2) arithmetic, (3) Mathematics, (4) mechanics, (5) nature-study, (6) mountain-study, (7) mineralogy, (8) mining, (9) study of materials, (10) machines, (11) electricity, (12) drawing, (13) mining police regulations, (14) legislation, (15) economics, (16) management, (17) mining calculations, (18) first aid, (19) physical exercise. This syllabus may be taken to be typical. Only, in those institutions which do not specialize in anthracite, the subjects of instruction comprise brown coal, slates, etc.

Engineers and other mining officials number 30,000 in the mines of Prussia. Of these 12,000 are “old boys” of these schools.

7. SCHOOLS OF NAVIGATION

Towards the end of the eighteenth century navigation was taught in the German sea-coast schools by Dutch teachers. Dutch text-books were used.

Swadeshism began with the “war of liberation” (1805-1813). The first schools were founded at Hamburg (1816), Luebeck (1820) and Breman (1825). To-day there are 12 schools of navigation of which 7 belong to Prussia. The school at Hamburg commands the greatest attendance,

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Navigation comprises five different kinds of "sailing", each with its own technique. So there are 5 different schools or grades comprehended in the *Seefahrtsschulen*.

(1) Coasting. The schooling includes the use of the sea-charts, the marine water-ways, the measures for avoiding collision, and safety regulations. The course is finished in 2 weeks. But nobody is admitted who cannot show practical sea-life for 50 months.

(2) Small or short-distance shipping. Subjects studied, mathematics, mathematical geography, astronomy, calculation of tides, management of boats, signalling, water-ways, marine diaries. Time required 10 weeks. Previous practical experience demanded for admission 60 months.

(3) Fishing in high seas. Subjects studied identical with these in small shipping. Time—6 weeks.

(4) Piloting. Subjects : German, English, mathematics (arithmetic, plain and spherical geometry, plain and spherical trigonometry), physics, mathematical geography, spherical astronomy, terrestrial and astronomical nautics, instruments, sailing, signalling, water-ways, marine diaries, marine and commercial legislation, sanitation. Time 32-40 weeks. Previous experience 45 months, of which a part must be spent in sailing ships.

(5) High (i. e. long distance) shipping. Subjects studied identical with those in the classes for piloting. Special attention is devoted to spherical trigonometry, the deviations of the compass brought about by the iron of the ships, the control of the chronometer, meteorology, Oceanography, the structure and classification of boats, the machines in ships, marine and commercial laws. Time 20 weeks (in addition to the time spent in the piloting class). Previous practical experience—24 months.

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Between 1910 and 1913 the annual average of scholars examined in different branches of navigation was marked by the following figures :—

200	in coasting,
286	in long distance shipping,
61	in high sea fishing,
665	in piloting,
456	in long distance shipping.

CHAPTER XXXI

GERMAN TECHNICAL SCHOOLS FOR SPECIAL INDUSTRIES 1

1 METAL INDUSTRIES

(a) SMITHIES OF ALL SORTS

IN Prussia the State maintains schools for special industries in metals at Iserlohn, Remscheid, Schamalkalden and Siegen. The scholars are between the ages of 14 and 17. The course covers 3 years and trains the students for the local industries, such as casting, modelling, engraving, enamelling, galvanizing, the construction of machine-tools, cutlery and smaller steel products.

Similar schools are maintained by the Government of Bavaria at Ansbach, Augsburg, Kaiserslautern, Landshut and Wuerzburg. The course covers three years but is not restricted to the industries of the spot. The technique of electrical installation as well as general metal industry constitute the curriculum.

A school for the manufacture of locks is maintained at Rosswein in Saxony by the Union of German Locksmiths. The course is completed in three half-years. Previous practical work is the condition for admission. The school obtains a grant from the State.

1 Based on A. Kuehne's *Handbuch fuer das Berufs und Fachschulwesen* (Leipzig, 1923).

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A school for the manufacture of apparatuses has grown up at Hanover under the auspices of the Union of German Coppersmiths. It is at present a part of the school of artisans maintained by the city. The course covers four semesters and is intended for those scholars who have finished the elementary public school and possess at least three years' practical experience.

(b) INSTALLATIONS

Schools for Installation-technology are to be found at Cologne on the Rhine as well as at Aue in Saxony. The period of tuition in each is three semesters. Practical work extending over several years is the pre-condition for admission. The technique of installations in all branches,—water, gas, heating and ventilation—forms the curriculum. The Cologne school is maintained by the State while the other receives a grant-in-aid.

(c) INSTRUMENTS AND MACHINE-TOOLS

For education in fine mechanical work there are three schools, one at Goettingen, one at Ilmenau, and the third at Berlin. The course covers 4 years at the first two, and 2 at the Berlin school. By theoretical and practical lessons the scholars are enabled to learn all that is necessary in order to construct according to design the finest instruments for scientific and technical purposes.

The apparatus for telegraph and telephone, typewriters, sewing machines, automatic calculators, cycles, gas-meters, water-meters, tax-meters, photographic and kino apparatus, gramophones, apparatuses and instruments for the dentist's office, electrometers, sliding shutters, safety lamps, incandescent lamps, electrical, optical and mechanical instruments, and such other tools and machines fall within the scope of "fine mechanical" construction which the students are taught at the Berlin institution run as it is by the industries.

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There is an optical school at Jena maintained by the State. The course covers one year and comprises photography, optical instruments and especially spectacles.

At Frankfurt-on-the-Main the association of physicists maintains an electro-technical institution where scholars get a 10-month course, theoretical and practical, in electrical work of all sorts.

(d) CLOCKS AND WATCHES

There are several schools for the manufacture of clocks and watches. These also belong to the group of institutions for "fine mechanics." At Schwenningen (in Wuerttemberg) and at Furtwangen (in Baden), both in Southern Germany, the schools are maintained by the State. The school at Glashuette in Saxony, a private institution run by the "gild of German Watchmakers," receives grants-in-aid from the city and the State. The scholars begin generally at the age of 14 and study four years at Furtwangen or three at the other two. The studies comprise, in addition to practical work, lessons in mathematics, projection, drawing, physics, chemistry, raw materials, clocks and watches, electrical engineering, measurements, and business.

(e) PRECIOUS METALS

Schools for work in precious metals have also to be noted. The one in Wuerttemberg is located at Schwaebisch Gmund and is about 150 years old. The course covers three years and comprises lessons in goldsmith's work, steel cutting, embroidery in silver, "chased" work, etching, colouring, and printing on metals, foundry work, casting and so forth. Chemistry, technology, drawing, and business are attended to. Special stress is laid on the æsthetic aspects, the questions affecting form and colour.

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A school of this type is maintained by the Prussian Government at Hanau. It trains up men and women as sculptors, ivory workers, goldsmiths, jewellers, engravers, lithographers, painters, photographers, watchmakers and "chased" workers. Provision is made not only for gold and silver but also for diamond. The scholar is to be at least 15 years old and must have the certificate of attendance for 2 years at a "continuation school."

In Baden there is a school for precious metals at Pforzheim which also turns out goldsmiths, engravers, enamel painters, silver-smiths, chased workers and chain makers. Previous practical work for 2 years is an admission requirement.

All these three institutions seek to orient themselves to their function as school for "fine arts."

2. WOOD WORK

(a) CARVING AND CABINET-MAKING

There are several schools of wood carving in Bavaria (Berchtesgaden, Garmisch, Oberammergau, Bishopsheim, and Zwiesel) known generally as *Fachschule für Holzschnitzerei*. Such schools are to be found in other provinces as well for instance in Baden, (at Furtwangen), in Hessen (at Erbach), in Silesia (at Warmbrunn and Flensburg), in Saxony (at Freiburg and Leipzig). In Berlin the institution is called *Tischler Fachschule* (Special School for Carpentry).

In these institutions the course covers generally 3—4 years and prepares the scholars for almost every industry in wood connected with furniture, house decoration, and sculpture. Training is offered in drawing, lathe-work modelling, chiselling, carving, etc. The scholars are at least 14 years old.

The Erbach school is specially devoted to ivory carving. All these institutions focus the attention on the æsthetic side of the industries.

(b) TOYS

Schools for the manufacture of toys are to be found at Sonneberg (in Thuringen) and at Seiffen and Grunhainichen (in Saxony). The schools serve the local industries and contribute to the training of taste as well as to the introduction of new forms in industrial art. The course covers four years. There are whole-time scholars as well as apprentices who are working in factories.

(c) CARRIAGES

There is a school for the construction of carriages at Hamburg. The course covers a year and a half. Wheelwrights, waggonsmiths and coach-engineers are turned out of this *Wagen-bauschule*. The scholars learn also the art of constructing the *Karosserie* for automobiles.

(d) MUSICAL INSTRUMENTS

In Mittenwald (Bavaria) there is a *Fachschule fuer Geigenbau* (for the construction of violin). This school trains the scholars in the art of making not only the violin but also other stringed instruments, for instance, viola, violincello, mandolin, guitar and zither. The course covers 4 years and includes lessons in drawing, playing on the instruments, and singing.

There is a similar school for the construction of musical instruments at Klingenthal in Saxony. It is open to both sexes and in its music section equips the scholars with sufficient knowledge of "harmony," both theoretical and practical, such as may enable them to judge the qualities of the instruments.

(e) WILLOW-REEDS

At Lichtenfels in Bavaria there is a *Korbflechterschule* (school for basket plaiting). A similar school exists at Heinsburg in Rhineland.

Everything connected with the manipulation of willow reeds for the manufacture of baskets as well as with the

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cultivation of the plant is taught. This course covers three years.

The schools are oriented to the local industries and are calculated to provide a living to the men and women on the spot. As supporters of "cottage industries" they have thus acquired a social significance.

3. CHEMICAL INDUSTRIES ¹

(a) CHEMICAL ENGINEERING

Chemistry with special reference to the machineries employed in the industries is the chief feature in a number of *Fachschule* distributed all over Germany.

One of the most well-known is the *Gewerbeakademie* at Chemnitz. The course covers 3 years and admits only such students as have completed six years of a higher school after finishing the public school at 14. The scholars are trained to take charge of chemical factories, mining works and laboratories.

The *Friedrichs Polytechnikum* at Coethen (in Saxony) admits scholars on the same conditions as the *Akademie* at Chemnitz. There are the following divisions:—electro-chemistry, photo-chemistry, iron and other foundries, electrical metallurgy, cement-technology, glass-technology, enamel-technology, paper-technology as well as sugar-technology. In Saxony a third school of the same type is to be found at Zwickau. It is known as the *Ingenieurschule*.

In Bavaria there is a *Hoehere Technische Staatslehranstalt* at Nuernberg which has an equally strong division for chemical engineering.

Prussia has two schools of this pattern, both maintained by the Government. They are known as the *Huet-*

¹ For education in Sugar-manufacture see the Chapter on Agricultural Education in Germany.

tenschulen (foundry schools), the one at Gleiwitz in Silesia and the other at Duisburg in Rhineland. The course in each covers 2 years but admits only such scholars as have worked for four years in a chemical factory. One-third of the curriculum is devoted to machines and engineering subjects. The object of these schools is to train up competent heads for the metal industries, iron foundries (including furnace, puddler, steel and roller work), copper, lead and zinc smelting, chemical factories, glass ovens, coke works, factories employing fire-proof building material, wire works, iron and metal foundries, and other allied establishments.

(b) PAPER MANUFACTURE

There are three institutions maintained by the *Verein deutscher Papierfabrikanten* (association of German paper manufacturers) where paper making is taught. The most influential of these is the division for paper in the *Technische Hochschule* at Darmstadt.

A 2 year course is offered at Coethen in Saxony. But the students must produce a certificate of two years' practical work in a factory. The shortest period tuition is given at Altenburg (Saxony) in the *Technikum*.

(c) DYEING

There is a school for dyeing at Erefeld maintained by the Prussian State. The course covers three years. Practical experience is a pre-condition for admission.

A similar school maintained by the Saxon Government is the *Faerbereischule* at Chemnitz. There is here a division for textile industry.

Dyeing with special reference to textile is taught at various schools in Prussia, *e. g.*, at Aachen, Barmen, Cottbus, M.-Gladbach, Langenbielan, and Sorau.

The Technikum fuer Textilindustrie at Reutlingen (Bavaria) has also a division for dyeing.

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(d) SOAP-MAKING

Private schools for all sorts of chemical industries exist in every large city. The chemistry of soap manufacture is taught, for instance, in a school at Berlin, which is described as an institution for fat, oil, soap and lubricating oil industry. The course covers 3—6 months.

4. CERAMIC INDUSTRIES

(a) BRICKS AND TILES

In Saxony there is a school for brick-making at Zwickau. The student must be at least 16 years of age and produce a certificate of practical work. The course is finished in 1 year.

For the manufacture of tiles for roofing, Saxony has a school at Glauchen. The subjects taught comprise architecture, roof-construction, building materials, lightning conductors, drawing, chemistry and housing law.

A Prussian school is located at Frankfurt-on-the-Oder. The course covers a year and a half. Chemistry, mineralogy, furnace-technology, mechanics, surveying, drawing and allied subjects are taught.

Prussia has another school of this type. It is located at Lemgo and carries a two-year course.

(b) PORCELAIN

At Hohn near Coblenz in Rhineland the Government of Prussia maintains a school which offers courses in every branch of porcelain manufacture. The training embraces two years. The corresponding school of Saxony is located at Bunzlau.

Importance is attached not only to the chemical technology, but also to the æsthetic aspect of the ceramic industries. The materials handled comprise porcelain, earthenware, stoneware, majolika, pottery, and so forth.

Drawing, modelling and furnace-engineering constitute the chief feature in the instruction.

The oldest of German schools in this line is the one at Landshut in Bavaria founded in 1873. The course covers two years. Pottery and furnace demanded special attention. Bavaria has another school which is located at Sell where the course is finished in a year and a half.

(c) GLASS

In Bavaria there is a school for glass industry at Zwiesel. The courses are offered not only in glass painting, engraving, cutting, polishing and etching but also in melting, foundry work and the allied technical side of glass manufacture. The school thus serves both fine arts as well as industry and takes the scholar through a three-year course.

At Ilmenau in Thuringen there is a school for the manufacture of glass instruments. The courses cover four years. Physics, chemistry and drawing are the chief subjects. Scientific precision is the aim of the school to promote.

5. PHOTOGRAPHY

At Munich there is a *Hoehere Fachschule fuer Photo-technik* which offers a three-year course in everything connected with photography. Allied arts such as chemography, photographic printing, engraving, etc., are also included. One division is given over to the film industry. To master the technology, business and literature of film completely, the scholar has to devote $2\frac{1}{2}$ years.

Saxony has a school of photography at Dresden which is really a part of the *Technische Hochschule*. In Berlin also the *Technische Hochschule* has a division for photography. In both these instances the photography classes are supported by industries connected with photography, optical glass and so forth.

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Photo-technology in its several branches plays a great part in the printing industry and book trade. At Dresden and especially at Leipzig, the centre of the graphic arts, there are "academies" differently named, which in the courses on printing include those in phototype, engraving, etc.

6. LEATHER INDUSTRY

At Freiberg in Saxony there is a school for tanning. It is maintained by the "Union of German Leather Industry". Courses are offered in tanning, fats and minerals, chrome leather dyeing, chemistry, fermentation, putrefaction, physics, microscopy, machine-tools and business. The course is finished in one year.

There is a school for the manufacture of shoes at Siebenlehen in Saxony. It is maintained by the city, not so much to cater to the shoe factories, as to the requirements of "home industry" and hand work. The course covers one year. The anatomy of the foot, measurements, shoemaker's last, leggings, cutting, calculation and book-keeping are comprised in the lessons. Drawing, preparation of models of the foot in clay, raw materials, foot diseases as well as surgical shoe-making receive attention.

7. GARMENT-MAKING

Dresden has a school for tailoring. The course covers 1—3 years according to the previous experience of the scholar. Special emphasis is laid on the *Kunst-gewerbe*, i. e., the "fine arts" side of dress making.

There is a number of schools for the manufacture of laces in different parts of Germany. These are designed not only to serve the local industries and provide means of livelihood to the women in their homes but also to improve the existing types of decoration and add new ones, thus enriching taste and life.

In Saxony there are 38 such lace-making schools. Boys and girls between 7 and 14 are the pupils. Some of these schools are used as workshops by the large factories or business houses in the neighbourhood. And the scholars receive wages at the local rates.

The Government of Saxony maintains at Schneeberg a school for the training of teachers in lace-making. The young women who have already finished a school course in lace-making are taught here to be able to devise new designs and better the old ones.

Saxony has a strong industry in gold and silver lace. A school is maintained by this industry at Erzgebirge. Girls are admitted at the age of 10 and work five years in pearls, buttons, fringes, borders, rings, plaitings, knots, locks, etc.

8. FOOD PRODUCTS

In Bavaria there is a *Hochschule* (college) for the manufacture of beer. Everything connected with brewing, cooking, milling and baking is taught. Researches are carried on in the fermentation and preparations from grains.

At Dippoldiswalde in Saxony there is a school for millers. It is maintained by the city and is completely equipped for milling as well as for the construction of mills. The course covers a year and a half.

Tobacco has a special division devoted to it in the school of brewery located at Grimma. It is a private institution. So far as tobacco is concerned the lessons comprise physics, chemistry, botany, microscopy, as well as fermentation.

For the study of the problems connected with hotel life there is a *Hoehere Fachschule fuer das Hotelwesen* at Buchholz near Dresden. In addition to cooking, hotel-management and raw materials lessons are offered in

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French and English. Those who have experience as waiters or managers in hotels and restaurants can obtain here the chances for a theoretical equipment extending over six months.

N. B.—The industrial background of these schools (Chs. XXIX—XXXI) is to be studied in the following publications : Sombart's *Volkswirtschaft im 19. Jahrhundert* (Berlin 1903) ; Wygodzinski's *Wandlungen der deutschen Volkswirtschaft im 19. Jahrhundert* (Cologne, 1907) ; Matschoss's *Berliner Industrie Einst und Jetzt* (Berlin 1906) and *Preussens Gewerbeboerderung und ihre grossen Maenner* (Berlin 1921) ; Schumachers *Deutschlands Stellung in der Weltwirtschaft* (Berlin 1915) ; Aubin's *Entwicklung und Bedeutung der mitteldeutschen Industrie* (Halberstadt, 1924) ; v. Walterhausen's *Deutsche Wirtschaftsgeschichte v. 1815-1914* (Jena 1920).

CHAPTER XXXII

A CROSS-SECTION OF SWISS ECONOMICS

HELVETIZATION

THE mountain valleys and lake cities of Switzerland are known the world over as delightful health resorts and charming mines of romantic beauty. The Helvetic republic, as the land is usually called by its own people, is also world-famous as the standard type of political unification realized among diverse races.

In European political psychology indeed the term Helvetization is used antithetically to the "state of nature" or the state of war with which the term "Balkanization" is associated. Each of the new states in Central and South-Eastern Europe, for instance, Poland, Tchechoslovakia, Jugoslavia etc., where more than one "minority" constitutes the racial, linguistic and religious web of the population has learned to look forward to the

Helvetic principle as an ideal in the manufacture of nations or states.

A GERMANY IN MINIATURE

But there is one very prominent aspect of Swiss life which seems to be generally overlooked. One is not fully conscious of the fact that Switzerland is, industrially and commercially speaking, a Germany in miniature.

Switzerland with a population of four millions i.e. forty lakhs is not larger than any two or three districts of Bengal. And yet it may be unhesitatingly described as a power in the world's economic system.

THE SWISS STANDARD OF ACHIEVEMENT

Indian patriotism has of late begun to be "intensive." The villages, parganas, taluks and mahakumas are now arresting the attention and activity of the social workers. At this stage of India's national development the example of a small state like Switzerland may not fail to furnish concrete hints as to how a population of, say, three districts ought to work in order that it may grow into a power among the powers of the world. The Swiss people have been setting the standard of achievement which every group of forty lakhs of men and women should attempt to approach in its economic and social endeavours.

AN ECONOMIC EARTHLY PARADISE

Water power is perhaps the only resource with which nature has plentifully endowed Switzerland. 22·4 per cent of the territory is unproductive land. And yet Switzerland happens to be one of the richest and most expensive countries of the world. The hand of man has converted this rugged mountain region into an earthly paradise from an economic point of view.

SAVINGS

An index to the wealth of the Swiss people is furnished by the amount of savings made by its four million inhabitants. From the statistics supplied by the *Schweizerische Volksbank* one learns that in 1835 the savings totalled 16·8 million francs (Rs. 3 = 5 Fr). The amount has increased from decade to decade in a steady proportion until to-day it has reached the figure 2,646,6 millions.

In 1835 there were 28 savings accounts per 1000 inhabitants.

To-day every 1000 inhabitants possess 693 accounts. In 1835, again, there was a saving of 8 francs per person while for to-day the figure is given at 667. A great part of these savings belongs to the working classes and peasants, since about one million persons i.e. one-fourth of the entire population is engaged in one form or another in trade and industry (1924).

TAXATION

The rates of taxation although varying in different cantons of Switzerland, are comparatively and absolutely very high. For an annual income of 3000 francs (=Rs. 1800) a person is taxed 82 francs in Zurich, 144 francs in Berne and 156 francs in Bellinzina (Tessin). An income of 10,000 francs is taxed at the rate of 460 in Basle, 770 in Zurich, 798 in Berne, and 1626 in Chur. The Swiss people bear the burden of taxation at a much heavier rate than other peoples on the continent, and they can also afford to do so.

SOCIAL INSURANCE

An important sidelight is thrown on the standard of living in Switzerland from the report on the proposed law on insurance against old age, sickness and death published by the bureau of economics of the Swiss federal government. Before the measure is finally undertaken a

preliminary step has been initiated in the matter of persons above the age of 65 whose sources of income happen to be inadequate.

The *Neue Zürcher Zeitung* says that 50,000 persons have been deemed worthy of immediate government help as "public charges." This number includes all these men and women above 65 whose yearly income is under 800 francs (Rs. 480). It is clear that every body earning less than Rs. 40 per month is helped by the government. Another fact to be noted is that in a population of forty lakhs there are not more than fifty thousand persons who are so poor as to earn only Rs. 40 per month.

FACTORIES AND WORKINGMEN

Every three months the federal government of Switzerland institutes an industrial census through its labour office. The latest figures indicate that about 330,000 hands are employed as "factory" workers, nearly 52,000 i.e. about 16 per cent being at work in 420 larger concerns. On the average there is an employment of 124 hands per factory. There are about 60 building companies with a total enrollment of some 5900 hands, a little less than 100 being the average per concern.

The eight hour day is enforced in 239 enterprises, i. e. in about 50 per cent of the larger concerns from which returns are available. In 213 works on the other hand, i. e. 44.5 per cent of the list more than 48 hours per week has been the rate of work. In other words, while about 30,000 persons work 8 hours a day not less 25,000 are used to work more than 8 hours.

The sentiment against the 8-hour law is very strong among the employer-classes, intellectuals, journalists and all those who belong to the so-called "bourgeoisie". But the working class is very strong in Switzerland and is not prepared to have the law modified,

CONCENTRATION

The number of *Vereine* and *Verbaende*, unions and associations, such as the industrial and commercial interests of Switzerland have established is a feature of economic life which no observer can miss. These organizations function as the most important units whenever customs duties come in question or whenever trade treaties with foreign nations are to be negotiated.

It was during the world-war and because of it that these economic organizations grew into mighty factors in the social life of Switzerland. In this respect the Swiss people may be said to be rather late in the field. The tendency towards concentration is still very patent, and as long as the problem of competition with outsiders remains as keen as it is today the role of unions, combines, syndicates and so forth bids fair to remain conspicuous.

A NATIONAL EXHIBITION

The *Schweizer Mustermesse* or the Swiss Sample Fair of Basel is an institution that owes its origin to the conditions of difficulty prevailing during the war. The Fair seeks to unify the industrial leaders of Switzerland and bring the foreign markets into touch with the products of Swiss industry. The exhibition is of a purely national character and differs from the *Messe* of Leipzig, Vienna and other centres of the continent in so far as it excludes all foreign goods from its stalls.

SMALL COMPANIES

The tendency to establish "limited companies" is an increasing feature of recent Swiss economic life. In 1902 the number was 2203. To-day it is as high as 8,227. The capital invested in the firms has risen from 1.8 in 1902 to 5.69 milliard francs in 1923. In 1902 the amount of capital per company averaged 951,000 francs. To-day the average has sunk to 296,000 francs. In other words the

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companies of smaller dimensions have been on the increase. There are 1450 "limited companies" each with a capital of less than 10,000 francs (i.e. Rs. 6,000).

SPECIALIZATION IN INDUSTRIAL LIFE

The most important element in Swiss economic life is furnished by the specialized character of the industries which Switzerland has developed during the last generation. Poor as the land is in raw materials, says Dr. A. Haas of Zurich, its industrialists would have been thrown out of the world-market long before the out-break of the world-war were it not for the specialization embodied in the kind of goods manufactured. Competition has grown keen since 1918 that Switzerland can continue to exist as a people solely if the industrialists know how to reorganize their workshops and products on the basis of greater and greater specialization adapted to the advancing industrialization of the backward societies.

TEXTILE INDUSTRIES

The silk goods of Switzerland command a world-reputation. About 57 per cent of the stuff manufactured in the Swiss factories is exported to England. Although the working men in the textile factories of France and Italy are paid at lower rates, Switzerland is competing with these countries on the foreign market in a successful manner.

In the manufacture of cotton goods as of silk Switzerland is dependent on foreign raw produce. The fluctuations in the prices of American, Indian and Egyptian cotton exert a great influence on the spinning and weaving works. Swiss factories and working men have automatically to adjust themselves to the varying world-conditions.

Swiss laces and embroideries are consumed in large quantities by Indians. About 10 million francs (60 lakhs

of Rupees) worth of laces manufactured in Switzerland come to India every year.

Among the woollen goods manufactured in Switzerland serges and worsted have up till now occupied the foremost position. More than two-thirds of the imported wool was used for this stuff. About 50 million francs worth of serges used to be exported.

But "protectionism" of the nationalists in foreign countries has dealt a severe blow to the export trade and along with it to the industry itself. Swiss manufacturers are now appealing to the patriotism of their own people in order to consume the *swadeshi* goods.

MANUFACTURE OF MACHINERIES

Switzerland has to compete with English, French, Belgian, Italian, German and American manufacturers in the delivery of machines, tools and machineries. And yet the raw produce is not native.

Swiss companies have their branches not only in France but also in Germany. The *Sulzer Works* of Winterthur are building machines in Paris (*Compagnie de construction mecanique*) as well as in Ludwigshafen and Mannheim in Rhineland. Diesel-motors manufactured by this company are being employed in the motor-tank ships of the *Deutsch-Amerikanische Petroleumgesellschaft* (German-American Petroleum Co.) of Hamburg, as well as in an English Four-screw passenger boat of 20,000 tons and a Dutch Two-screw passenger boat of 15,000 tons. The company has independent sales offices in London and Cairo and is represented by agencies in Rumania and Italy. Even in the United States, for example, at St. Louis, Diesel engines are being constructed on the Sulzer patent.

In addition to motors the Sulzer Co., manufacture pumps, ventilators, steam-engines. The production of

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cooling and heating apparatuses of the largest dimensions belongs also to the credit of the firm. The spinning and weaving factories of Switzerland as well as of some foreign countries obtain their moisture-installations from these works.

ELECTRICAL WORKS

The manufacture of electrical goods is one of the specialities of Switzerland. Competition with other electrical powers on the world market has compelled Switzerland to fall back to a great extent on the local market. In order to keep the industries going, the federal government, has been proceeding to the electrification of the Swiss railways at an accelerated speed, as one understands from the annual report on Swiss industries published by the *Schweizerische Kreditanstalt*, one of the leading banks of Switzerland.

Electro-chemical manufactures play a conspicuous role in the industrial life of the Swiss people. The Motor-Columbus Company of Baden, for instance, possesses a capital of 60 million francs. An important business method of this great house is indicated by the ruling that 5 per cent of the net profits must every year be deposited in the reserve fund until this latter grows up to 10 per cent of the paid-up share-capital.

REACTION TO FOREIGN COMPETITION

The pressure of competition from newly industrialized lands is being felt in Switzerland in almost every field. The *Elektrizitätswerk Lonza* of Basel used to specialize in the manufacture of electrical ovens. But during the war and since the production of electro-thermal apparatuses has been growing apace in countries which had previously been Switzerland's best customers. In the meantime the price of coal has risen, freight has gone high and protectionism is abroad. The Lonza

Works have therefore been compelled to institute a thorough reorganization in technique and finance.

Altogether new products such as the derivatives of carbides, acids, and manures are now being manufactured. The company has several firms affiliated to it in different parts of Switzerland as well as in France. Among the electro-chemical manufactures, of the *Lonza a citosynthese* a synthetic product from carbide and *Meta*, a fuel material are well known beyond the borders of Switzerland. A factory has also been established for the manufacture of synthetic ammonia according to the process invented by Professor Casale.

COMPETITION IN THE SHOE TRADE

The Swiss people not only manufacture their own shoes but have always been furnishing foreign nations with shoes. But for sometime the foreign markets have been getting closed by customs duties and *swadeshi* movements. As long as the rates of wages continue to be high in Switzerland the chances for export are few and far between. The struggle for existence and exigencies of the world trade are compelling the Swiss people to revise their social standards for the time being.

GOVERNMENT BOUNTY TO THE WATCH

INDUSTRY

Watches and clocks constitute perhaps the best propaganda for Switzerland in foreign countries. The greatest competitor of whom the Swiss watchmakers are afraid is the United States. The Swiss federal government was for two years (1922-1923) compelled to grant a "bounty" to the manufacturers in order somehow to maintain their record abroad. At the beginning of the present year (1924) the subsidy has been called off since the crisis is over and, Switzerland's foreign customers have shown no change

of mind. The subsidy totalled about 8 million francs, says the *Chambre Suisse d'Horlogerie*.

India, as is well known, happens to be an important customer of Swiss watches. The latest figures indicate that China bids fair to be a very prominent market. As always the United States continue to occupy the first place, Great Britain the second and Japan the third : China's present position is just behind Japan's.

THE MESSAGE OF SWITZERLAND

Altogether little Switzerland will appeal to every young energist who accepts life as a grand theatre of struggle and who is determined to fight his way through in the teeth of fierce resistance. This has been Switzerland's eternal message to mankind.¹

CHAPTER XXXIII

THE TRANSITION IN ITALY TO AN INDUSTRIAL STATE

THE rapidity with which Italy has been advancing in industrialisation constitutes an important item in the economic dynamics as registered in the facts and figures of the *Corriere della Sera*, the daily of Milan. There is an international aspect attached to the growth of industries in Italy, for, as is well known, the Italian undertakings can hardly go ahead without foreign help. And this not only in the shape of finance such as America and Great Britain can furnish but also of technical experts, engineers and chemists from Germany.

WAR AND INDUSTRIALIZATION

The industrial movement in Italy is, strange as it may appear to Indians, very very young. Previous to

1 In Bindschedler's *Schweizerische Handelspolitik* (Chur 1928) Swiss commercial politics are treated historically since the establishment of the federation. *Die Schweizerische Papierfabrikation* (Konstanz 1928) by Frick deals with the economics of Swiss paper industry.

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1914 both in regard to machineries and chemical products Italians had invariably to depend on supplies from abroad. But as in the case of India, Japan, Spain and other comparatively undeveloped countries the War proved to be a veritable godsend to the enterprises of Italy.

The needs of the army on the one hand as well as the impossibility of satisfying them with imports from overseas compelled the Italian Government and industrialists to start a vigorous "*Swadeshi*" campaign. The old works were enlarged, and altogether new undertakings, some of colossal magnitude, came into being. Hand in hand with the factories, the banking institutions grew in numbers as well as prospered.

CRISIS IN ITALIAN SWADESHI

The end of the war closed the epoch of Government orders, secure and handsome as they were, and the inevitable happened to the Italian "*Swadeshi*" concerns as to the *swadeshi* movement in other lands in post-war years. The crisis was manifest in economic life all along the line, the most catastrophic index to the reaction being the notorious closing down of the Banca Italiana Disconto.

The situation was cataclysmic for the working classes. Socialistic or rather communistic (Bolshevistic) occupation of the factories of Lombardy and other districts marked the year 1920. Strikes reached the dimension of 1,267,953 heads and industrial loss could be counted by 16,398,227 days.

ACHIEVEMENTS OF MUSSOLINI

It was this economic depression and crisis in national life that gave the fillip to fascism. In October 1922 the fascists marched upon Rome and compelled the King to hand over the reins of the Government to their chief.

In a year and a half strict discipline and order have become habitual in factories as in other walks of public

life. The working men have been pacified with the eight hour day as the law of work. And when Mussolini lectures to the steel workers of Lombardy in some such strain as the following: "I myself began as a manual labourer and know what it is to be a wage-earner in a smith's shop. But I know also that it is wrong on the part of the wage-earning class to behave as if its interests were separate from those of the nation. On the contrary, you must function as the soul of its soul,"—the hypnotic effect on the audience is instantaneous.

INDUSTRIAL REST

To what extent the working class is really satisfied with the present state of things there is no adequate means of knowing; for among the achievements of the dictatorship of the Fascist Napoleon must be counted a contraband of the free press. But that steady improvements are on in the factory morale has been recently testified to by the group of Swiss journalists who made a tour of inspection through the industrial centres of Northern Italy.

The number of strikers came down to 66,102 in 1923. and the loss in working days to 295,929. The figures register the lowest water mark since 1914. A mark certainly of industrial rest so far as it goes.

MUSSOLINI'S SHIPPING POLICY

Mussolini has not been building castles in the air. His expansionist policy rests on solid foundation. Of all the manifold activities which Italy has of late been exhibiting in different lines of national enterprise none is more characteristic than the slow but steady development of the mercantile marine.

The ideas of Mussolini on the subject of shipping and sea-borne trade are quite clean-cut and precise.

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Colonialist as he is, he does not, however, seem to be blind to the fact that there is a limit to which state aid, management or control can go in furthering oversea commerce and promoting the establishment of Italy as a great power in shipping.

GOVERNMENT SUBSIDY

"Private" enterprise is the motto that lies for the time being nearest to Mussolini's heart. It is only exceptional circumstances that would justify in his estimation any direct Government action. Certain Government monopolies, although not of a very important order, have already been transferred to private companies. On the other hand, the Government is seriously at work on the subject of "subsidy" to be granted to private steamship lines. Sr. Costanzo Ciano, late Commissioner for the mercantile marine and at present Minister of transports, is engaged in faithfully carrying out the shipping policy of the Fascist premier.

ITALIAN MERCHANT MARINE

In 1914 Italy's tonnage was figured at 1,430,000. To-day it has risen to about 4,000,000. In 1923 Italy built altogether 150,000 tons of shipping. But at any event Italy is still behind Japan, and this latter, as is well known, happens to be but the fourth in the list beginning with Great Britain and with the United States and France as the second and the third.

The rate at which Italy has been advancing would be apparent from a comparison with the U. S. A. In 1914 American tonnage was registered at such a low figure as 2,000,000, i. e., about 50 per cent more than what Italy possessed at the time. But in ten years the shipping commanded by the U. S. A. has assumed the bulk of 17,000,000. This is just $4\frac{1}{2}$ times the Italian tonnage of to-day. While Italy's increase has been about three-fold only, that attained by American shipping is $8\frac{1}{2}$ times.

THREE SHIPYARDS

Mussolini's problem is to push the rate in a manner that would be consistent with the ambitions of the Fascist imperialists and yet at the same time not absurdly at variance with the actual resources of Italy. For it must be remembered that there are in Italy not more than three ship-building centres of real importance. The foremost of these is the Ansaldo Company at Sestri Ponente near Genoa. The Orlando Company which builds also war-ships, is located at Leghorn. The third great Italian yard belongs to the Savoia Company.

GENOA AND TRIESTE AS PORTS

A very optimistic report has been published in the *Italian Mail* of Florence, from which one can guess that Genoa is already a rival to Marseilles as a port, and as a calling place for liners. The Italian services to America are daily increasing in popularity. The ships recently constructed for the *Lloyd Sabaudo* are said to vie in comfort and efficiency with the British and German liners. Naples also is prospering, but it is in the Adriatic that one can see the greatest changes.

Trieste has beaten all its pre-war records, and Venice is to become once more a big commercial-centre now that the channels to its port have been widened and deepened to admit ocean-going ships. The revival in this case is especially noteworthy because Venice has been commercially decadent since the eighteenth century although her geographical position in the Adriatic is unique.

MILAN'S INDUSTRIAL COMPLEX

The city of Milan has been fast developing into a gigantic industrial complex. The environs are dotted over with factories and workingmen's houses.

One of the most important industries which has raised Italy on to the international plan as a competing

factor on the world market is that connected with automobiles, lorries, wagons and so forth. The Alfa-Romeo carriages are no rare vehicles in the streets of leading cities.

RUBBER GOODS

The Pirelli Works of Milan are no less well-known in the world of rubbers, tyres and other rubber goods. The manufacture of cables is a very prominent item in this house. The factories are provided with laboratories and testing shops of every denomination. The scientific equipment is complete.

ELECTRIFICATION

Electricity is going to play an important role in the industrial life of the coming decade. The water power resources of Northern Italy, especially of Trentino (the Italian Tyrol) have been engaging the attention of "high finance." A part of the railways has been electrified.

Although the electrical industry in Italy should really be described as a thing of the future there are already some prominent firms whose products can hardly be characterized as a negligible quantity, says the expert of the "*New Zürcher Zeitung*." The chief along this line is the Marelli Co. of Milan. At Saronno the Romeo Works manufacture motors and electric locomotives. A third house is that of Bado in Liguria on the Genoa Coast. This firm also is engaged in producing engines and motors.

MARELLI A NATIONAL INSTITUTION

It is against very sharp foreign competition that the Italian electrical industry has to function. And since up till now the works have been able to keep their heads high one is very often made to feel the "patriotic" character of these "National Institutions." One can notice the child-like glee with which the Marelli men

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declare about themselves. "Not a lire here, and not a man in these works, that is not Italian."

This "*swadeshizing*" is however, but another instance of the wish being the father to the thought. For, foreign exports have not been totally excluded nor is the use of foreign machineries yet taboo.

THE MOST MODERN CITY

Milan has only one rival, and that is Turin, considered to be most "modern" city in Italy. As the headquarters of Piedmont, the state which ventured to pioneer the "*Risorgimento*" of 1860 in the days of Mazzini, Garibaldi and Cavour, happens, moreover, to be associated with the romance of freedom's exploits and political idealism.

THE FIAT WORKS OF TURIN

It is in Lingotto not far off from Turin that the Fiat Works, perhaps the most widely known of Italian firms, are located. One can almost say, as remarks the "*Journal de Geneve*", that the installations have attained American modernism. The grounds and buildings cover an area of 84,000 square ft. and the workers are numbered at 23,000.

German visitors likewise, as one understands from the "*Deutsche Allgemeine Zeitung*," havenot failed to be struck by the organizing ability of Italians whom they as a rule used to look upon as novices at play in the kindergarten stage of machine industry. The motor cars of the Fiat Company have earned for Italy a reputation in engineering in different quarters of the globe. Sixty cars a day constitute the rate of manufacture.

AIR SHIPS

The Fiat Works also possess a concern for the manufacture of airships which formerly belonged to the

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Ansoldo Co., of Gonoa. Like many other enterprises this also is a child of the war-times. Officers of the army are busy here as pilots and engineers. Mechanical training is being afforded to the "Civil" also.

TEXTILE INDUSTRY

Turin counts likewise textile factories among its industrial concerns. There are about 90,000 working men and women employed in the spinning and weaving factories. Brocade is one of their chief products.

THE JUTE MILLS OF ITALY

The district of Piedmont is rich also in "*Jutificio*" or jute works, about one-fourth of the Italian jute mills being located within its confines. The other works are distributed over Liguria, Lombardy, Venice, and Central and Southern Italy. There are altogether 23 jute factories in Italy with a total of 60,000 spindles and 4,000 looms.

During the period from 1908 to 1920 Italians imported 2,234,924 bales of jute from India. The average per year is 200 to 250 thousand bales, i. e. 36 to 45 thousand tons.

A CHANCE FOR BENGAL

Bengal will take note that not a "*chatak*" of this great monopoly of hers has been shipped to Italy by or through Bengali agencies. The jute trade is entirely in the hands of foreign dealers. Why should there be no concerted effort on the part of the Bengal jute growers to sell and deliver the goods "direct" to the Italian spinners? There are Italian shipping companies whose boats ply regularly between India and Italy.

For all business with Italy one should have to enter into negotiations not with Rome but with Milan. The great banks to deal with are the *Credito Italiano*, the *Banca Commerciale Italiana* or the like.

RAW MATERIALS

For cotton as well for jute, Italy has to depend on foreign countries like the other manufacturing nations of Europe. But this little survey of "modern" industry in Italy will not be complete without the statement that, virtually, not an ounce of coal or iron-ore comes out of Italian sources. Italy is hopelessly dependent on importation from abroad for these two great "keys" to mechanical and chemical Engineering.

With the exception of olive oil, silk is practically the only raw material of importance in which Italy is self-sufficient. The great centre of silk spinning and weaving, again, is Northern Italy. Como situated on the Alpine Lake of the same name is the silk city of the Italians.

A BRIDGE BETWEEN THE MEDIÆVAL AND THE MODERN

Italy continues thus to be an essentially agricultural country. The only diversities of Italian economic life are furnished, first, by the mediæval cottage industries in embroidery, lace-work, glass, art-goods etc., and secondly, by the travels of foreign tourists¹ whose visits of investigation to the different culture centres and health resorts bring millions of foreign gold into Italian hands every year. But so far as "industry" is concerned, Italy has the same hard problem before her as any other semi-feudal, semi-developed country, for instance, Japan.

For students for applied economics Italy's efforts at advance will be of interest as indicating some of the stages in the transition from mediævalism to modernism. In the

¹ In an essay on "Die italienische Handelsbilanz und die auslaendischen Touristen in Italien" in the *Wirtschaftliches Archiv* (Kiel, Oct. 1924) Prof. Alfredo Niceforo of Naples discusses the Italian "balance of accounts" and comes to the conclusion that 800,000 that foreign travellers spent about 2,500 million liras (Re=6 li) in Italy in 1922.

scale of social dynamics Italy belongs, therefore, strictly speaking, not so much to the economic system prevailing in trans-alpine Europe (Teutonic states, France and Great Britain) as to the system which may be described as the "Mediterranean". Indeed, the Italian people, although constituting a "greatpower" in international politics, is in terms of economic development but an elder brother, so to say to the Balkan group. The bridges between the Balkans and the adult industrialism as embodied in "Western Europe" are to be noticed in the young industries of Italy which should for the same reason be also justly appraised as the connecting link and transition between Young Asia and the grown-up Eur-America ¹.

CHAPTER XXXIV

COMMERCIAL AND FINANCIAL DEVELOPMENTS IN TURKEY

THE NEW TURK AND GERMANY

THE re-entry of Germany in the economic life of Turkey is the most outstanding feature of her recent economic developments. And perhaps no other mark of her military victories over Greece and diplomatic successes over the "allies" at Lausanne is more significant than the fact that she has lost no time to resume her relations with her old ally, Germany, from whom she was forced to stay apart by the conditions of the armistice.

¹ In *Die Handels be Zicohungen Zwischen Italien und der Schweiz* (Commercial relations between Italy and Switzerland), Weinfelden, 1921, F. Bek devotes special attention to the industries, banks, communications etc., of Italy down to 1914. On the special subject of silk see the *Natizie Statistiche* published under the auspices of *Associazione Serica Italiana* (Milan, 1925.)

The political *Milieu* of the economic developments may be studied in the chapters on Italy in the present author's *Politics of Boundaries* (Calcutta, 1925).

See the chapters on *politica economica* in Bachi's *L'Italia economica nel 1921*. Giustis *I Prestiti pubblici contratti all'estero* (Milan 1921) deals with Italy's foreign debts.

The compulsory evacuation of Constantinople by the allied troops in October 1923 registers the beginnings of Turkey's new role in international intercourse. Curiously enough, left to himself the Angora Turk has chose to be as friendly to Germany's commerce and industry as Soviet Russia.

GERMAN INDUSTRIES IN TURKEY

In May (1924) there was an agricultural exhibition organized by the Turkish Government at Adana. German interests were represented by no less than 300 firms. Agricultural machinery is from now on to be pouring in Turkey not only from the United States as before but also from Germany. German factories have been engaged to furnish steel bridges for Anatolian railways as well as locomotives and rails. The famous "Stinnes Complex" has stationed itself at Constantinople in order to tap the coal trade and mining resources of Turkey.

Angora has had experts' visits from the *Allgemeine Elektrizitaetsge sellschaft* of Berlin. The Krupp Co. of the Rhine-Ruhr and other influential concerns have been likewise interesting themselves in the demands of Angora for electrical goods and installations.

Between Constantinople and Angora an air-service is in contemplation. The Junker Co. of Central Germany has obtained the concession.

Nor have Germany's shipping lines been lagging behind. The Orient Line and the Levant Line have recommenced operations in Turkish water.

SWADESHISM IN NAVIGATION

The most important feature of Turkish economic life in the last six months, however, consists in the tendency to expel all foreign control wherever possible. *Swadeshism* has been making conquests all along the line.

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By the law which came in force on January, no foreign shipping company is entitled to ply boats between any two Turkish ports. None but Turkish boats are, besides, to operate in the coasting trade.

This proviso is important for by the Treaty of Lausanne altogether nine foreign companies have to be treated as exceptions. They will therefore be compelled to operate Turkish boats if they are to function between two Turkish ports.

But of course this *Swadeshism* in the navigation law does not prevent a foreign company from operating ships between a foreign port and a Turkish port.

BOOM IN SHIPPING TRADE

A great fillip has in this manner been rendered to the shipping trade in Turkish hands. In October 1923 Turkey did not possess more than 32 indigenous vessels with a total tonnage of 31,000. But in nine or ten months since then, the tonnage has increased to 60,000. The merchant marine consists at the moment of writing (July 1924) of about 70 bottoms.

Turkish shipping companies have been placing orders for passenger and cargo ships at foreign docks. The lead is being taken by the Seiri Sefain Steam Navigation Company.

IMPERIAL OTTOMAN BANK

The *Swadeshi* spirit has likewise been triumphantly at work in the domain of banking. The Angora Turks' dealings with the Imperial Ottoman Bank open a remarkably new chapter in Turkey's financial politics.

As is well known, the Imperial Ottoman Bank is the institution that previous to the war furnished the financial centre of Turkey. And notoriously enough, it happened to be the source of her vassalage to foreigners.

The New Turk has decided to re-grant the Bank the old concession to function as the state bank and as the note-issuing institution. The concession is to run provisionally for about ten years, until March 1935.

RIGHTS OF TURKISH MUSSALMANS

But several very significant provisions indicate the epochmaking character of Turkey's new regime.

In the first place, within three years the Bank must have 30 per cent of its staff manned by "Turkish Mussalmans. "The proportion is to be 50 per cent in five years. And in seven years the total salaries paid to the Turkish Mussalman *personnel* must not be less than 30 per cent of the entire sum spent in salaries.

In the second place, at least 10 Turkish Mussalman employees of the Bank must be sent every year to the Paris and London branches for experience in banking management.

Thirdly, the Turkish minister of finance will have the right to nominate six persons, out of whom three are to be selected as members of the Bank's directorate.

These are some of the conditions which are to mark the transition stages *en route* to pure *Swaraj* in banking.

CHAMBER OF COMMERCE

Up till now the more important Turkish agencies of foreign business houses lay in the hands of the Greeks and Armenians. But with the success of nationalism these foreign elements in Turkey's economic life have virtually disappeared.

New companies of "Turkish Mussalman" membership have been springing up like mushrooms with an eye to deal with foreign trading houses. These are being affiliated to the *Union nationale de commerce turc* (Turkish chamber of commerce) in Constantinople.

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It has been decreed that only such firms as are members of the Chamber will be eligible for government orders. Foreign companies have therefore been seeking affiliation with this chamber or are trying to get Turkish Mussalman companies as agents.

THE ANATOLIAN RAILWAYS

The story of the Anatolian railways,—the Constantinople—Konia section as well as the Konia—Yesnige section (the famous "Bagdad Railway") is familiar to students of diplomacy and "high finance." Down to 1914 German interests were in the ascendant. There was no change during the war period.

Since the armistice an Anglo-Swiss Company has got control over the system. There are French and Italian interests also but these together fall below 50 per cent. Recently, however, several "problems" have arisen.

A German financial group under Baron Schreoder has made its appearance for the working of the line. On the other hand, an all-British concern, known as the Turan Development Company, is bidding against the Anglo-Swiss as well as the new "German menace."

NATIONALIST DEMANDS

But all the same the Anglo-Swiss has been attempting to keep its head erect. Its director, M. Huguenin, came down so far as to accept all the demands formulated on behalf of Turkey by Mukhtear Bey, the minister of public works.

The Turks have demanded that the entire correspondence of the company must be carried on in Turkish language. The railway officials must be Turkish Mussalman by nationality and faith. And only such foreign experts are to be employed as and when approved by the Turkish ministry. Another demand of the Turks is to

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the effect that local coal is to be utilized for the engines and that foreign coal only when indispensable.

Swadeshism in Angora has gone beyond these items during the last few months. The nationalists are not ready to submit to foreign management although it has agreed to satisfy them in all particulars.

AMBITIONS OF THE YOUNG TURK

There is a strong movement going on in Angora directed towards the buying up of the Anatolian Railways. The ambitions of the Young Turk have appeared to Mukhtear Bey much too above the dictates of financial prudence. For he believes that the Turkish government is not master of funds enough for the purchase.

The extremist proposals having got the upper hand Mukhtear Bey has considered it expedient to resign. The problem is awaiting further developments. It is not clear as yet if the government would run the risk of buying the railways and operate them as state enterprises.¹

CHAPTER XXXV

SIDE-LIGHTS ON THE ECONOMICS OF REPARATIONS.

THE ECONOMIC CENTRE OF GRAVITY

DIRECTLY or indirectly every economic item in the world's life today, from the value of the rupee and the accumulation of gold in the United States Federal Reserve Bank to the Russian demand for loans in England and the deflation tactics in the Balkans,—is connected with the reparations problem. Economic harmony or equilibrium, should such a thing be said to exist in the world-order, essentially dynamic as it is, can be established only when this question is finally settled.

The matter appears to onlookers to be mainly an affair of conversations between the diplomats of London

¹ See the Chapters on Turkey in my *Politics of Boundaries* (Calcutta, 1926.)

and Paris over which the journalists of the two countries engage in heated controversies. But no subject of contemporary economics is of greater universal importance. The question of reparations constitutes in reality the centre of gravity of the financial and economic system of every nation that is worth anything.

In each country, of course, the phenomenon has been manifesting itself in a different manner. Some of the manifestations in France and Germany, the two poles of the present international complex, ¹ will serve to throw instructive side-lights on the problem. The "larger bearings" of every "internal" question cannot fail to be brought home to the investigators in applied economics.

THE FALL OF THE FRANC

In France today politics both internal and external are centred on the fate of the franc. In peace times the sterling was equivalent to 25 francs. That parity has never been attained since the signing of the peace. But by 1921-22 the exchange came to be stabilised at £=50-55 fr. In 1923, however, almost synchronous with the occupation of the Ruhr and the precipitous fall of the German mark the franc began to show signs of "sympathetic" sinking.

Towards the beginning of the present year (1924) the symptoms became ominous and the *Journée Industrielle* (Paris) was led to make the following observation. "In a few months," it was said, "unless the government takes immediate and energetic measures a creditless France will have to encounter a Germany strong in credit." The financial strength of Germany was referred to because of the stabilization of the currency brought about by the establishment of the *Rentenbank*.

In February 20 the *Temps* (Paris) spoke of a panic in French financial and lay life. Two reasons were assigned

¹ See the chapters on France and Germany in my *Politics of Boundaries*.

for the situation : first, the nervousness of persons who have to make payments abroad and therefore buy foreign monies, and secondly, the loss of confidence in French currency which prevails among the exporters.

The same occasion led the *Manchester Guardian* to some criticism of French foreign policy. Six months ago, it was alleged, the French press had been bent on isolating Great Britain from the continent. But the fall of the franc together with the general rise of prices has, it was said, created a new spirit among the French people who are now seeking to work hand in hand with England.

The franc was falling all the same. One pound was often equivalent to about 110 francs in spring although the sterling itself, had sunk in relation to the dollar.

POINCARÉ'S LAST ACHIEVEMENT

The French *Chambre des Deputes* devoted several weeks to the discussion of measures calculated to prevent the further sinking of the franc. In February a law has been passed authorizing the finance minister to control the buying of *foreign* monies by merchants and private persons in a very strict manner.

Secondly, taxes of all denominations have been raised 20 per cent. The enhancement of the rate of taxation is to go hand in hand with such retrenchments as will enable the state to save at least one milliard francs in 1924.

In the third place, all titles, documents, certificates, etc., existing in the possession of persons who command shares in commercial, industrial or other undertakings, have been placed under the tax-collector's supervision. The only exception is the *Bons de la defense*, which belong to the category of war-loans. These alone are not to be taxed.

By all these fiscal reforms the French Government proposes to raise additional $7\frac{1}{2}$ milliards. In France it is

notorious that taxes have been evaded by the citizens all the time. Poincare's strong hand, determined as it was to show no mercy to anybody, was being appreciated even by the democratic elements in the Parliament who had always protested against his dictatorial despotism. But he had to earn unpopularity among his own flock, the nationalists and industrialists "of the right", who are opposed to increment of taxation.

Altogether, however, European statesmen could not help admiring the speed with which only a country that is so centralized in constitution and sentiment as France could accomplish such serious and revolutionary tasks. The *Neue Zuericher Zeitung*, the bankers' daily of Zurich, for instance, noted that Poincare was not only an able lawyer and masterful diplomat but had functioned as finance minister on two previous cabinets, once in 1894 and the second time in 1906.

In France, it is clear, the fall of the money was officially treated as dependent on the politics of the budget. The budget reform would, it was expected, check the sinking of the currency.

FRENCH BUDGET

Since the end of the war there has been instituted in France a system of two budgets, one the ordinary budget and the other the budget of an extraordinary character. This extraordinary budget is meant for the expenses involved in the reconstruction of regions mutilated or devastated during the war. By the treaty of Versailles, Germany is responsible for these disbursements. On theory, therefore, the framers of the French budget have really been functioning as creditors of German Government. But since Germany has not yet paid her dues to the creditor, this latter has been compelled to borrow, *i. e.*, issue loans in order to meet the reconstruction charges.

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On account of this extraordinary budget known as *Budget des dépenses recouvrables*, i. e. the budget of recoverable expenses, the French public debt has grown to much above 100 milliard francs.

This dichotomy of the budget, the source of the post-war deficit, has been now abolished. Both the budgets are to be constituted as one for the current year and all the expenses, both ordinary and reconstructional, are to be met from the regular normal receipts of the State. It is for this reason that new incomes have been sought by emergency taxation and retrenchments. It need be remarked *en passant* that France still holds true to her thesis that reparation expenses must come from Germany and that the occupation of the Ruhr continues to be the surest guarantee for this payment. The Poincare ministry has fallen. But the last achievement of Poincare, namely, the financial reform is being upheld by his successor Herriot.

THE MONEY-POLITICS OF FRANCE

The official view of the present financial situation in France was however contested by several statesmen and financiers of importance. Forgeot said in parliament "the present crisis is due not to the budget-but to the balance of the *Banque de France*. The Government banking institution has issued notes to the extent of 69 milliards on the strength of a reserve of only 5 to 6 milliards. It is in the circulation of large amounts of paper money that the trouble has to be sought."

According to the socialist financial expert, Auriel, the State should monopolize all purchases of foreign currency no matter for what purpose. All French exporters were to be compelled to accept French money in return for their goods. Industrialists were of course violently opposed to this plan.

Klotz, the late finance minister of the Poincaré régime, traced the fall of the franc to altogether different quarters. He said that speculators in foreign countries were in possession of 10 to 15 milliards of French money. Long-period credits had therefore to be offered by French traders in order to balance this foreign ownership of francs.

THE RATE OF EXCHANGE

Outside the *Chambre* critics of the new laws were no less outspoken. At the *Ecole des Hautes Etudes Sociales* (school of higher social studies) a lecture was delivered by M. Loucheur, the electrical engineer, who, on several occasions had been deputed by the French Government to confer with Rathenau and other German representatives on the economic arrangements to be entered into between the two countries. In analysing the situation Loucheur said: "There are three factors which are generally considered to be important as influencing the rate of exchange. The first is the circulation of notes. The second item is the balance of trade. The last but not least is known to be the budget. But so far as the present story of the franc is concerned none of these factors has played any role."

In 1919 there were 37 milliards of bank notes in circulation, which rose only to 39 milliards in 1923. The Government had paid back some of its debts to the *Banque de France* in the meanwhile, enabling it thus to dispense with the use of the note-printing press to a considerable extent. But the franc fell notwithstanding in an extraordinary manner during the same period.

In four or five years the amount of public loans, further, sank from 27 to 23 milliards. And yet there was no check to the fall of the franc as everybody would naturally expect, said Loucheur.

In the second place, the balance of trade has improved considerably. The year 1919 began with a deficit of 27 milliards as legacy of the war-period when almost every commodity had to be imported. By 1923 the export-schedule showed itself "active," *i. e.* more weighty than the import-schedule. And yet, said Loucheur, it was a mistake on the part of the finance minister, de Lasteyrie, to congratulate himself on the conditions of foreign trade,

The "balance of accounts" and not the simple "balance of trade" is what matters. Loans made by France to Austria, Tchechoslovakia, Poland, are some of the items which the finance minister had ignored in his report. Interest had to be paid to foreigners on the French stocks possessed by them. For instance, there are the payments to be made to people who delivered goods to France and have invested their wealth in French commerce, industry and agriculture. In Loucheur's calculation these loans and other items come up to about 40 milliards. Some of these payments are balanced indeed by incomes such as the French people get from foreign stocks as well as the 3 milliards of foreign money spent by tourists in France.

But altogether the "balance of accounts" (including trade) gives a deficit of 3 to 4 milliards. It is this deficit that, according to Loucheur, accounted for the depreciation of the French currency. The remedy suggested by him was the heightening of production and the acceleration of exports.

In regard to the "ordinary" budget it is curious that during 1920 and 1921, while there was a deficit, the franc was improving; whereas in 1923 while a strong taxation policy established a balance between receipts and disbursements, the franc began to fall. The so-called "*budget*

des dépenses recouvrables" should not, according to Loucheur, be called a budget at all as the payment does not come out of the French pockets. He was therefore strongly opposed to the raising of the rate of taxation.

LOUCHEUR'S SUGGESTIONS

"The fiscal retrenchments proposed by the government are moreover useless," said, Loucheur. "The ordinary budget provides for an expenditure of 30 milliards. Of this only 13 milliards represent actual state disbursements, the rest being given over to payment of interest on or amortization of loans. It cannot be said that French administration is extravagant. The rise in expense is simply *nominal*. It does not represent a rise in the real costs but only a corresponding increase in the price-levels. Not more than 500 millions are likely in any case to come out of the so-called economies".

In Loucheur's prescription what France needs is first a confidence of the French people in themselves, and secondly, a better press-propaganda in foreign countries in order to demonstrate the positively favourable character of French finances. In regard to taxation, even without increasing the rates the government could realize 2 milliards per year, solely by compelling the evaders to pay their dues. Besides, the government was advised to issue a gold loan, consisting not only of French values but also of the 25-30 milliards of foreign values existing in the possession of the French citizens. And finally, said Loucheur, "the importing of British coal and nitrates worth about 1 milliard must be prevented by all means, because it is possible to realise the same amount from Germany on the reparation account."

PROFESSOR GIDE'S VIEWS

Professor Charles Gide was of opinion that "the uniform raising of the rate by 20 per cent would create

inequality as well as hardship." But, according to him, "the fact that France is determined to impose new taxes will create a favourable impression in foreign countries." In Gide's analysis the fall of the franc was not to be explained by the financial and fiscal conditions of France, but by international politics." "The franc can improve," says he, "only when England, France, Germany and America unite to discuss world politics, *i. e.* reparation and war-debts on friendly terms."

To a certain extent Gide's idea about the "favourable impression" created abroad by Poincare's financial reform has been verified. For, an Anglo-American loan under the leadership of the Morgan Bank of New York, has since then come to the rescue of the franc. But all the same the franc continues to oscillate between 80 and 90 to the £ (July, 1924.)

THE RUHR WAR IN GERMANY

In Poincare's interpretation of Versailles the reparations could be extorted from Germany by "sanctions" *i. e.* the force of arms. Hence the Franco-Belgian occupation of the Ruhr.

The Ruhr-War has meant good business for Great Britain. The coal market became brisk and the unemployment question was partially solved. It compelled also readjustments in the world-trade in ores, machineries and chemicals. India, for instance, is not unaware how the closing of the Rhine-Ruhr has affected the "direction" of her imports and exports. But let us watch the developments in Germany.

The occupation of the Ruhr Valley by the Entente (January, 1923) as well as the "passive resistance" of the German people, practically brought the local industries to a standstill. But the men, women and children of the

territory had to be maintained with bread and butter. The financing was undertaken by the German Government.

While Ruhr was not in a position to export any manufactures, its demand for imports from unoccupied Germany or abroad remained constant, especially in the line of food products. It is just these goods that Germany has to buy in foreign countries *i. e.*, for which Germany needs foreign money. The passive resistance campaign contributed, therefore, to the most persistent demand for foreign currency on the part of German banks and business houses. The fall of the mark has thus ultimately to be traced in huge proportions to the economics of the Ruhr-war.

The deep fall of the mark (in September, 1923, one English pound was equivalent to 200,000,000 paper marks) was then caused by the attempts on the part of industry as well as of the people to provide themselves with foreign monies. But it automatically brought higher prices in its train and as a consequence also higher wages. The working capital of the factories and workshops found itself incapable of coping with the situation engendered by the sudden heightening of the demands from the side of the workers.

Nor was credit forthcoming to help forward the industries, especially since the Reichsbank considered it prudent to minimize the advances as much as possible. To this have to be added the high taxes on industry.

ECONOMIC AFTERMATH OF PASSIVE RESISTANCE

The result was diminution in production all along the line. In any case German production reached a stage at which goods could be delivered at prices, which, according to the Bulletin published by the ministry of commerce, were in certain instances as high as and in others higher than world-market prices.

The economic consequences of the occupation of the Ruhr and of the virtual cutting off the Rhine-Ruhr from the mainland of Germany, began to make themselves felt in the summer of 1923. In August and September, the official reports from the chambers of commerce in every part of Germany were stories of factories closing down or working short hours and of workers thrown out of employment.

On October 1, the volume of unemployment in Germany was officially declared to be 298,844. On the 15th it was registered at 376,491. By the end of November, there were a million and a half unemployed in unoccupied Germany. Last February the figure rose to just the double. The present figures are almost reaching the post-war depression figures of the United States. Be it remembered *en passant* that the unemployed receive financial support from the Government.

FINANCIAL RECONSTRUCTION

Unemployment is one side of the German economic life as affected by the failure of the passive resistance (September 1923), registering as it did another crushing national defeat of Germany at the hands of the Allies. The other side of the shield is represented by the financial muddle and the efforts at reconstruction which have been in evidence in Germany since last autumn.

On November 15, the German Government has established a new bank, known as the *Rentenbank*, as a temporary measure in order to solve the currency crisis.¹ A new money, the *Rentenmark*, has been issued by this bank. Its stability is assured by the values existing in Germany under the two main divisions of "gold" loans. One of these is based on the entire German landed estates. The other

1 *Vide Supra* "Currency Crisis in Germany."

loan is covered by the properties of the industries, commercial corporations and banks.

Just at present there are two sorts of *Wertbestaendiges Geld* (stable money) in Germany. One is the Rentenmark described above. The other is the *Dollarschatzanweisung* (the Dollar treasure bill). "German dollars" in denominations of $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, 5, units have been issued by the government on the strength of the loan in American dollars raised in Germany towards the beginning of 1923.

By issuing these two monies as medium of circulation the German Government has been able to withdraw a large amount of paper money. But since the amount of these "gold" monies is not large enough, the papermark continues still to be *legal tender*, i.e. it must be accepted by everybody in economic transactions. The values of the Rentenmark and the German dollar in terms of the paper-mark fluctuate in exactly the same proportion as the foreign monies.

At Hamburg as well as at Kiel gold-giro-banks have been established. They issue notes on the strength of their deposits in foreign money. These notes, says the *Berliner Tageblatt*, constitute "gold" currency and promise to be the fore-runners of the gold mark which the *Reichsbank* of Berlin expects to put in circulation for entire Germany in the near future.

These transitional stages have prepared the ground to a substantial extent. In spite of the opposition of the "nationalists" the German government has considered it prudent to accept the conditions of the Entente in regard to the establishment of a gold-bank which is to function for all Germany.

The first fruits of the ministerial changes in Great Britain, Germany and France are thus going to embody themselves, among other things, in a co-operation of Ger-

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many with the Entente in matters financial. The Ramsay MacDonald-Marx-Herriot measures in contemplation during the present summer may at last be said to contain within them the germs of a more or less stable settlement of the economics of reparations.

CHAPTER XXXVI

THE ECONOMIC REJUVENATION OF FRANCE

INDUSTRIAL EXHIBITIONS

IN the industrial line France has of late been taking rapid strides. The growing number and importance of the engineering and other industrial exhibitions are objective evidences in point to all foreign observers.

WATER-POWER

M. Herriot has just laid the foundation stone of the buildings at Grenoble intended for the exhibition of water-power and touring to be held next year. Touring in the French colonies, especially in Algeria and other African possessions is to occupy a very prominent position among the exhibits.

In water-power resources France¹ ranks just after the United States and Canada. Ten million horse-power is available of which in 1913 not more than 10 per cent was exploited. But just at present France has been making use of something less than four million H. P. While considering the question of water-power one should realize the fact that as many as 8,000,000 tons of coal are equivalent to and can be replaced by 1 million H. P.

DEVELOPMENT OF HYDRO-ELECTRIC INSTALLATIONS

In 1921 the cables for the distribution of electrical energy measured about 14,375 miles in length. By the

¹ Cavallès' *La houille blanche* (Paris, 1922); Blanchard's *Les Forces hydroélectriques pendant la guerre* (Paris, 1925).

end of 1923 it was 43,750 miles. The progress marks an increase of 200 per cent. Altogether 24 million people are served by these installations. The entire industry represents a capital of 3,500 million francs (Re.=5 Frs.)

The magnitude of these electrical works will be apparent from some of the other figures. There are 5 establishments, in each of which the capacity for production is 40,000 H. P. The number of installations each with a generating capacity of 20,000 H. P. is over 20.

RAILWAY ELECTRIFICATION

Part of the state railways in the Nord districts has been electrified in 1923. In the districts of the Alps, Lyon, Saint-Etienne, and the Massif Central the electrification of several lines has been started during the same year. The city of Lyon is going to be partly supplied with energy from the Viclaire Works in the Alps. The Orleans, Midi and P. L. M. (Paris-Lyon-Mediterranean) railways,—covering as they do 5,500 miles,— have also been touched by the new construction which no doubt will take several years to complete. Altogether about 6,000 miles of electric railways are already in operation.

ELECTRICITY IN RURAL RECONSTRUCTION

In 1913 there were 4,000 villages or little towns (*communes*) in France making use of electric energy for domestic and industrial purposes. In 1923 the number rose up to 10,000. The French government is seeing to it that the entire *moffufl* be furnished with electricity during the next decade or two. The approximate expenses of this enterprise are likely to amount to 4,000 million francs.

Just at present not every village is prosperous enough to buy electricity. The electric works, again, cannot produce and deliver the current, cheap enough for rural centres of moderate means. The State, therefore, is coming to the

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assistance of the communes. A law has been passed in August 1923 to the effect that provided the rural authorities agree to pay a certain part of the expenses the remainder would be borne by the central government.

ARTS AND CRAFTS

The exhibition of arts and crafts in the *Grand Palais* at Paris has been a phenomenal success. The number of French visitors was unusually large. The exhibition is not a government or municipal undertaking but an enterprise of the general confederation of French artisans.

SMALL INVENTIONS

Lesser French inventors, are used to exhibiting their patents every year in the *Concours Lepine* on the *Champ de Mars* in Paris. This year's exhibits include, among other things, the inventions in wireless telegraphy, mechanical installations, photography, sports articles, toys and so forth.

AIR ENGINEERING

France is organizing an international exhibition of air industries for two weeks in December. Airships, balloons, aeroplanes, hydroplanes, helicopters, airships without engines, etc., are the items scheduled. Engines and propellers, metallurgy, machine tools, as well as the industries connected with meteorology and cartography are also included.

INTERNAL DEVELOPMENTS

These exhibitions furnish but solid comments to the great industrial and commercial awakening that is patent on every side in France. From the time to time reports in the *Journee Industrielle* (Paris) it appears that almost all "the great industries" are equally prosperous. The coal mines of the devastated regions have been repaired satisfactorily and the output will soon exceed the pre-war quota. New canals and waterways are in course of construction and point to the internal economical developments.

ARTIFICIAL⁵ SILK

A new industry that has become very prominent is that connected with the manufacture of artificial silk. About 120 million francs (Re 1 = Frs .5) represents the capital invested in this line. There are already 12 large factories and 9 more are in construction. Three to four tons of artificial silk per day will be the yield of some of these concerns.

FRANCE REJUVENATED

Both water-power and coal have been plentiful and France has been doing justice to them in an energetic manner. In the mean time, be it observed, the reconstruction measures have furnished the French people with the latest and most up-to-date equipments in technique. Better methods of economic organisation have also been daily coming into use. The addition of the two rich manufacturing provinces, Alsace and Lorraine, should also likewise be counted among the post-war resources of the people. The result is that industrial France is a thoroughly rejuvenated land.

EXPORTS EXCEEDING IMPORTS

By 1922 France succeeded in outdistancing her pre-war figures in foreign trade. Since then the volume in tonnage has been continuously and steadily on the increase. From January to June 1924 the exports exceeded those for the same period in 1923 by 2,300,000 tons. Chemicals and electrical apparatus used to be imported by France in 1913. Now she exports them.

FINANCIAL MEASURES

It will be recalled that since his accession to power Herriot has not made a single statement which might lead the world to suspect that he intended in any way to tamper with or modify the financial measures organized by Poincare at the eleventh hour. The balancing of the budget and together with it, the fate of the franc are two

important items on which the Herriot ministry is at one with its predecessor. It is estimated that the total receipts of the government by taxation will during the current year exceed those of 1914 by 500 per cent and those of 1919 by 200 per cent.

THE MORGAN LOAN

The deficit is being made up by the strictest economies. Even the *Temps*, the nationalist organ, appears to be satisfied with the socialist government's budget scheme. And on the other side, the Morgan Bank of the United States, which in March came to the rescue of Poincaré with a loan of 100,000,000 dollars, is once more supporting France, although now bossed, as she is, by the party-opponent of Poincaré.

INTER-ALLIED WAR-DEBTS

While France has been advancing all along the line there are yet critics to point out the weaker links in the country's economic chain. According to the *Journee industrielle*, one of the most pressing problems to which the French government should address itself is that of the inter-allied war-debts.

Unless this question be solved, says the *Journee*, there can be no stability in French finance. For "tomorrow, it will not beat Geneva—where Herriot and Ramsay Macdonald have been studying world-problems, but at Paris on the question war-debts that the English and the Americans will impose a dictate of disarmament on France."

THE DATA OF FRENCH INDUSTRIALISM

While watching these recent developments it would be well to get oriented to the state of industrialism¹ in France about a decade ago. In 1914, say the authors of *La France d'aujourd'hui*, i.e., "France To-day"

¹ Leon's *Fleuves, Canaux, Chemins de Fer* (Paris 1903).

(Paris 1924), "France ceased to belong to the first rank of the great industrial powers. She had long been outdistanced by England, and in the last quarter of the nineteenth century also by the U. S. and Germany. Nay, she was almost on the point of being beaten by Japan and Russia. Not that French industry was weakening, but the industries of the other countries were advancing at a quicker pace."

Poverty in coal was one of the chief weaknesses of French industry. The extraction of coal had risen in France from 1 million tons in 1820 to 32 millions in 1900 and 41 millions in 1913. The figures for the U. S. at the last date was 517 millions, that for England 287 and for Germany 279. In order to serve the industries France was compelled to import 22 million tons. German coal was being used in the French sections of Lorraine.

COAL AND THE "HEAVY INDUSTRY" AT THE ARMISTICE

In the chapter on *La Metallurgie apres l'armistice*, in his *Comite des Forges* (Paris 1919) Pinot has analyzed the industrial situation of France at the armistice in regard to coal and the "heavy industry" (ore, cast iron and steel). The situation has also been compared with that of Germany, England and America under the same heads.

The statement would be clear in the following table (in millions of tons):

	Production of				Deficit in coal.
	Coal.	Ore.	Cast iron.	Steel.	
France 1913	40	22	5.2	4.7	22
France+Alsace- Lorraine (1919)	44	43	9.1	7.0	30
France+Alsace- Lorraine + Saar (1919)	57	43	10.5	9.0	22

The annexation of Alsace-Lorraine leads to an accession of 4 million tons only. But since the mines in this territory possess the capacity for contributing to France 21 million tons of ore 3, 4 million tons of cast iron and 2, 3 million tons of steel, the new conquest is a "white elephant" unless new sources of coal come in French hands. In 1913 France suffered from a deficit of 22 million tons of coal. But with Alsace-Lorraine the deficit has grown higher, viz. up to 30 million tons.

But for 15 years France has the right to the coal mines of Saar. This also does not help matters much. For although Saar brings 13 million tons of coal the total French industry needs 79 million tons. That is, even with the command over Saar, which legally is but temporary. France continues to be in exactly the same situation as she was in 1913. The deficit in coal is measured by 22 million tons.

FRANCE'S HUNGER FOR COAL

While France has a dearth of coal other countries have a surplus. The figures are as follows:

	Production of				Deficit or Surplus.
	Coal.	Ore.	Iron.	Steel.	
France	57	43	10·5	9	—22
New Germany	175	7	11·5	12·3	+ 32
Great Britain	287	16,	11	7·7	+ 77
U.S.	550	63	31	32	+ 21

Thus Germany can afford to export 32 million tons of coal, England 77 and the United States, 21.

The capacity of France for the production of iron and steel has been doubled, as one can see from the figures in 1913 and 1919. But the annexations have not helped her to be self-sufficient in coal, the *Pain de l'industrie* i. e. the bread of industry.

It is this hunger for coal that explains most profoundly the French march on Germany's coal-fields, the Ruhr Valley, and is bound to dominate the problems of applied economics in Eur-America for quite a long time. It need be remembered that if and when (in 1934) Saar goes out of French hands, France would find herself in a miserable situation as indicated above with a deficit of 30 million tons.

In the meantime France is congratulating herself on being the richest country in Europe in the matter of *l'houille blanche* i. e. white coal, as water-power is called in contrast with *la houille noire* (black coal). Water-power and electrifications will greatly make up for the deficit in coal.

ENGLAND VS. GERMANY VS. FRANCE

In regard to the developments in the coming decade it is noteworthy, further, that France with her 43 million tons of ore is at present the second richest country of the world in iron.¹ The first in this line is the U. S. with 63 millions (1913), and the third is Great Britain with only 16 millions. The total production of ore in the world amounted to 170 million tons in 1913. France thus commands 25 per cent of the world's iron resources.

And since Germany with 7 million tons is virtually nowhere, her attitude to French industry is not likely to be more friendly than that of Great Britain who already is too jealous of French ambitions in "heavy industry." One of the grounds of an *entente* between Germany and England may be furnished by this common antagonism to French iron.

1 The situation in iron and coal as it was a quarter of a century ago may be studied in Villains' *Le Fer, la houille et la metallurgie a la fin du XIX^e siecle* (Paris 1901).

On the other hand, Germany's effort to sell coal is likely to meet with resistance from England on the French market. The chances for France co-operating with Germany in economic fields are not to be ignored, for in the matter of coal England and Germany are sure to be powerful rivals. In any case, triangular conflicts between England, Germany and France may be expected to be some of the prominent features in the economic history of the near future.

A chemical and industrial encyclopaedia, entitled *Dix Ans d'efforts scientifiques et industriels* i. e. Ten years of Scientific and Industrial Enterprise (1914—1924) is in preparation under the auspices of the *Societe de Chimie Industrielle* (Paris). One hundred and fifty collaborators have been working at the volume which is to be complete in 3,000 pages. The general editor is M. Daniel Berthelot who is responsible also for the chapter on "chemistry and industry." Loucheur has been induced to write on the economic enterprises of France, Professor Moureu, the chemist, on scientific and industrial research in France, Pinot on French metallurgy, Peyerimhoff on coal mining etc. etc.

CHAPTER XXXVII

THE VIENNA CHAMBER OF COMMERCE

ITS EDUCATIONAL ACTIVITIES

EVERY year in October and November the Chamber of Commerce at Vienna organizes courses of lectures on all sorts of economic and technical subjects. The object is to offer higher training to those persons who have already had a previous schooling in these branches or are employed in some bank, bureau or workshop. The students get chances to have personal discussions with the professors as well as visit the important collections of the city under the guidance of experts.

ECONOMIC AND TECHNICAL TEACHING

The educational activities of the Vienna chamber may be grouped under six heads. First come the subjects of general economics. Then there are the industrial branches. A third group consists of bank-topics. There is a special division for the problems of the Stock Exchange. Modern languages constitute one division. Finally, there is a permanent industrial institute maintained by the chamber which functions as a regular school of technology.

The methods and problems of study will be apparent from an analysis of the courses that are being offered this year, (1924). The social and academic position of the teacher will in each instance indicate the standard of discussion and value of the schooling.

GENERAL ECONOMICS

There are eight different courses comprised in "general economics."

(1) The technique of business supervision and balancing of accounts is one. There are six lectures, once a week, and these are given by the protector of the *Hochschule für Welthandel* (College of World Commerce). The school meets in the *Technische Hochschule* (Technical College).

(2) Another subject is the conflict between "business" and government over money. The lectures are six in number and the lecturer is a secretary of the Bank Commission.

(3) An introduction to finance, including loans, inflation, etc., forms the subject matter of six weekly lectures by a legal adviser of the Austrian National Bank. The school meets in the Vienna Academy of Commerce.

(4) The fourth course is devoted to the "Commercial politics" of Austria since the revolution and the

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principles of future development in the trade line. The subject is finished in four lectures given by a "Dozent" i.e. an assistant professor of the University, who, besides, possesses the old imperial title of "Regierungsrat," something like a Rai Bahadur.

(5) The taxation of business enterprises in Austria constitutes an independent subject. A professor of the University enjoying the title of "Oberfinanzrat," the highest in the line of official distinctions, offers fourteen lectures, once a week in the Gremial Academy of Commerce.

(6) The taxes on sales or business consummations as they are in practice are discussed in six lectures by the same professor.

(7) The new customs tariff and its effects on Austrian industry, trade and standard of living form the subject of one course. The secretary of the chamber of commerce is the lecturer.

(8) The foundations of "social politics" are discussed by an expert in sociology. The course consists of nine lectures given in the club rooms of the Austrian teachers of technology.

INDUSTRIAL AND TECHNICAL THEMES

Eight different courses are likewise included in the division of technological subjects.

(1) The "industrial arts" of Austria, their past and present position as well as their economic significance for the people form the subject matter of two lectures. The director of the Austrian Museum for art and industry is the lecturer. The students are taken round the museums and exhibitions of the city.

(2) There are four lectures on the method of evaluating the collections in the Museum of Folk-Arts. The

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lectures are delivered by a professor of the University who is at the same time director of the Vienna Museum of Anthropology.

(3) Stones in technology form the subject matter of four lectures given by the director of the mineralogical division of the Natural History museum. The subject covers building materials, the raw material for the ceramic industry, mining products, as well as the raw materials in metal and chemical work. The school meets in the Museum.

(4) Photography and photomechanical reproduction comprise ten lectures given by a professor of the University in the Institute of Graphical Studies and Research.

(5) Printing likewise comprises ten lectures given by a professor. The school meets in the above institute.

(6) On the heating arrangements for residential and office rooms a professor of engineering gives six lectures in the museum of Industrial Technology.

(7) There is a course of twelve lectures on textile products given by a professor in the Austrian Academy for textile industry. The lectures deal with the history, technology, and artistic aspects of the textiles. The methods of testing the qualities are studied. Visits to factories and collections are arranged.

(8) The proper installation and handling of machines and mechanical apparatuses are taught by an engineer with private practice. Ten lectures are delivered in the club-rooms of the Austrian teachers of technology.

BANKING AND BOOK-KEEPING

Five different courses are offered in this division

(1) The technique of book-keeping and control of accounts practised in the leading banks constitute one course of twelve lectures. The lecturer is a bank director.

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The course seeks to acquaint the students with the internal management of a bank with special reference to the employment of machinery ("mechanical" work.) The actual details in calculation, revision of accounts balancing, etc., are specially attended to.

(2) Twelve lectures are offered on the different methods of book-keeping by the Director of the Academy of commerce.

(3) Book-keeping as practised in transportation and goods offices forms the subject matter of ten lectures given by a professor.

(4) Six lectures are given by an assistant professor of the College of World Commerce on the balances presented by business houses with special reference to the law of taxation.

(5) The organisation of banking-houses. Twelve lectures given by a bank director.

STOCK-EXCHANGE

Three courses are offered on the subject of the Bourse,¹ all in the rooms of the Museum of Technological Industry. The lecturers are secretaries of the Vienna "*Borse*."

(1) The Vienna Stock-Exchange, —the legal and technical aspects of business conducted in it.

(2) The Vienna Goods-Exchange and the exchange courts of arbitration.

(3) Shares and the legislation bearing on them.

During the business hours of the exchange the students are taken round the gallery.

¹ Paillard's *Les grands marchis financiers* (Geneva, 1924); Scheffer's *Bankwesen in Oesterreich* (Vienna, 1924).

LANGUAGES

Three languages are offered, namely English, French and Italian. But not elementary lessons are expected here. The professors give lectures on economic treatises in these languages and help the students in the reading of those books.

INDUSTRIAL INSTITUTE

The above are all temporary courses offered during two months as indicated above. In addition, the Vienna Chamber of Commerce through its division for fostering industries offers several courses from year's end to year's end, to which only those who are employed somewhere as apprentice are admissible.

This industrial institute consist of six divisions.

(1) Shoe-making. The manufacture of shoes and all their parts is taught in one division.

(2) Carpentry. The course comprises (a) work in architectural wood work and furniture-making, (b) finishing in timber goods (c) industrial drawing as well as (d) machine practice.

(3) Book-binding. The binding of books in all its details is the scope of this teaching.

(4) Carriages. The students are taught to build carriages of all kinds.

(5) Manipulation of Metals. Practical courses are offered in (a) iron-construction for the building trade, (b) lead and zinc sheeting, (c) aluminium products, (d) galvanic technology.

(6) Electrical Technology. The teaching is addressed to those that are engaged in the installation and handling of electric motors.

BOURGEOIS TACTICS AND SOCIAL ORDER

A chamber of commerce is not an educational association. It is a society of money-makers. But along with

money-making or rather as an aid to money-making the heads of credit institutions, merchant princes and captains of industry have found it paying to start schools of higher learning in economics, commerce, banking and technology.

A cynic might perhaps be justified in looking upon such efforts as but "bourgeois" tactics calculated to foster capitalism and intensify its grip upon the hungry intellectuals and middle classes. But one need not ignore the great strides in the dissemination of knowledge effected thereby among the different strata of society. For one thing, the technical information and practical experience with which the people happen to get equipped through these agencies endow them with a power whose impact on the social order consciously or unconsciously cannot fail to be tremendous in the long run.

CHAPTER XXXVIII

THEORIES OF MONEY OLD AND NEW

PRICE-RELATION

THEORETICALLY the most important problem in the theory of money is the question of the relation between money and price, the amount of money and the price-schedule, in other words, the quantitative aspect of money.

The eternal law is well known that supply and demand determine the prices of all markets—whether of goods and labour, or stocks and currencies. This, however, although analyzed by economists in all its details with special reference to the elasticity and rigidity of goods and monies, is not enough. Two more questions remain yet to be attacked. First, how do the goods stand in relation to one another? In other words, what is the theory of price-relation? In the second place, what is absolute price, i.e., how does money stand in relation to all commodities?

THE QUESTION OF LOANS

An equally important problem in the theory of money is that bearing on price as a function of deferred payment. This however is but an aspect of the larger question of loans.

How is debt contracted in gold marks previous to the Great War or in silver talers previous to 1870 to be repaid in Germany to-day ? The fall of the paper-mark compared to the par of 1913 is well known. The value of the gold mark, compared to the silver taler of 1870 had also fallen two-thirds. In German courts of justice the prevailing judgment has been to the effect that the debts are to be paid back in the currency obtaining on the day of payment. The law of debts does not recognize the changes in the purchasing power or value of the money. In other words, loans according to the state or Governmental practice are not "real" but "nominal".

WAGEMANN'S TREATISE

If the loans can be conceded to nominal what then is the unit of value ? What then is money ? These and other questions are discussed in a volume of about 400 pages entitled *Allgemeine Geldlehre* (General Principles of money) by Professor Ernst Wagemann of Berlin (published, 1923, by H. R. Engelmann, Berlin).

The book is essentially a contribution to the analysis of economic concepts. Every term that has been employed in economics since the birth of the science specially in the related fields of money and price has received a critical and constructive treatment at the hands of the author. One is once more led to the conviction that philosophy, and in so far as the science of money has a philosophic bearing, is fundamentally a structure of definitions.

In recent times economics has grown more and more into a discipline in facts and figures. For all practical purposes one need not go beyond the reports of banks and factories, the statistics of prices, wages, interest and discount, or the bulletins on exports and imports in order to master the mechanism of the forces and laws that regulate economic development. Wageman has to his credit such a descriptive and statistical work, for example, the one on Chile entitled *Wirtschafts-Verfassung der Republik Chile*. But the author's present work on money like *Inflation et Deflation* by Yves-Guyot and Raffalovich of the *Societe d' Economic Politique* of Paris is all the more valuable since it emphasises the part that pure theory has always played and is still playing in banking, currency and monetary problems.

FRESH DATA OF ECONOMIC HISTORY

Several circumstances have contributed to a revolution in the attitude of science to the problem of money during the last three or four decades.

In the first place, as is well known, altogether new phenomena have presented themselves before students of money in and through the tremendous development of notes and bank accounts.

Certain special incidents have also called for notice. For instance, during the seventies of the last century both in Austria and Russia, while the silver currency was depreciating, the paper money seemed hardly to be affected by the circumstance. This curious anomaly had to be attacked by theorists as a novel case.

In the meantime, in sociology, in jurisprudence, in general economics as well as in other branches of human science new tendencies have manifested themselves, their impact on the nature of money could hardly be resisted with success.

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THE GREAT WAR AND MONEY

Then came the great war, with its world-wide economic readjustments. One has had the opportunity to observe on a telescopic and hemispheroidal scale the monetary facts and relations such as cannot fail to endow the science with objectivity and precision, wherever they may have been needed.

Paper money and inflation, these are the two legacies of the war which are patent even to the layman. In addition there has arisen an interesting problem. During the war period, although the production of gold fell off, the world prices in terms of gold did not fail to rise! And this rise has taken place two to three hundred per cent in a few years.

When one remembers how it took decades for prices to reach the same heights under the influence of the constantly increasing production of gold and silver after the discovery of America, one wonders if the relations between money and economic transactions or between gold and money have not undergone a thorough transformation in recent years. One is therefore led to ask indeed with Wicksell, Hahn, Wagemann and other theorists if gold can still be conceded the old rôle as the material for money.

Then there remain the great facts of inter-allied war-debts to America and German reparation payments to the allies. The theory of money has to tackle these problems independently of their bearing on politics and general economic development.

KEYNES' TRACT

One of the latest contributions—theoretical albeit—to the problem is furnished in J.M. Keynes' *Tract on Monetary Reform*, which is being highly appraised by "German Science" (cf. *Welt-wirtschaftliches Archiv*, Kiel 1924). The

author begins with the hypothesis that gold standard has virtually been abandoned everywhere and establishes the thesis that so far as England is concerned it should be unwise to return to the gold standard. In regard to the United States, we are told that for the past two years this country has *pretended* to maintain a gold standard. In fact it has established, a dollar standard, and, instead of ensuring that the value of the dollar shall conform to that of gold, it makes provision, at great expense, that the value of gold shall conform to that of the dollar.

Anthropological data bearing on economic development as well as historical statistics of our own times are thus co-operating to inaugurate a transvaluation of values in the interpretation of money. For one thing, the majesty of gold and with it the superstition of mankind regarding the metallic basis of money has been profoundly shaken not only among the masses in Central Europe and Soviet Russia, but also among philosophers and money-politicians. The analysis of monetary theories such as we find in Wagemann's treatise will therefore be of extraordinary significance in the understanding of modern culture and the trend of philosophical reconstruction.

KNAPP'S EPOCH-MAKING-THEORY

In the question of money, says Knapp, human beings are naturally "metallists," i.e. they are disposed to identifying money with gold. But the scientist is forced to be a "nominalist" because it is not generally possible to define the "unit of value" as a certain "amount of metal." Thus comes the paradox: Money has validity but no value.

In all civilized States the "unit of value" has long grown into something nominal. It is a historically defined idea which belongs as a part to the legal system of the land

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According to German theorists the publication, in 1905 of *Die Staatliche Theorie des Geldes*, (The statal or Political Theory of Money) in which Knapp makes the above statement constitutes a landmark in the history of monetary theories.

Since then, several important publications, e.g. Benedixen's *Das Weesen des Geldes* (1908, The Nature of Money), Singer's *Das Geld als Zeichen* (1920, Money as Sign) and others have contributed to develop the core of Knapp's cohtentions.

THE NOMINALISTIC THEORY OF MONEY

Nominalism as a theory, such as is being propagated in prevailing economic circles in Germany to-day, adumbrates two simple propositions.

1. Gold=goods.
2. Money=sign of value.

In German science, this, however, is not a novelty. Historians can point back even to the philosopher Kant who in 1797 taught that money is but a means to an end and that it has no value in itself. Among specific economists may be cited Adam Mueller in whose *Versuch einer neuen Theorie des Gelds* (1816, Attempt at a New Theory of Money,) occurs the concept that a piece of metal becomes a coin not because of its weight and fineness but because of its "localisation" i.e., marriage or association with the law of a country. In other words, it is the fiat of the State that dubs metal money. "No state, no money."

In the same strain Hufeland had pronounced in *Die Lehre vom Geld und Geldumlauf* (1819, the Theory of money and circulation of money) that money is but goods which have "value only for exchange." This value of money as medium of exchange, however, does not depend on the price of the metal itself nor on its value as a commodity for consumption but on a social fact."

Oppenheims *Natur des Geldes* (1855, Nature of Money), also establishes the same thought that money is independent of its metallic content.

In all "dignified" volumes such as Roscher's *Grundlagen der Nationaloekonomie* (1854, Principles of political economy) such ideas were treated as mere curiosities of science. On the other hand, even in socialistic-revolutionary economics they formed but the butt of ridicule, for instance, in Karl Marx's *Das Kapital* (1867).

All the same, the nominalistic tendency has ever and ever reappeared. Heyn's *Papierwahrung mit Goldreserve fuer den Auslandsverkehr* (1894, Paper-money with gold reserve for foreign transactions) and other contributions have been well digested by Knapp. And Mark's *Das Gold nicht mehr Geld* (1897, Gold no longer money) has not been less suggestive and convincing to the systematizer of the new theory.

SYMBOLISM

According to Professor Wagemann the new theory is trying to construct a synthesis out of two conflicting theories, namely : symbolism and metallism. In the first place the contention of nominalists that gold is not equivalent to money, but is only goods, has been the idea of the metallists as opposed to that of the symbolists. Secondly, the nominalist theory of money as being nothing but a sign is a cardinal point in the thinking of the symbolists but quite at variance with that of the metallists, according to whom money has an inner value, i. e. objective worth.

The entire symbolist position may be thus indicated :

$$\begin{array}{rcl} \text{money} & = & \text{gold} \\ & = & \text{symbol of value} \end{array}$$

Symbolistic tendencies are to be found in Bodin's *Les livres de la republique* (1568), Locke's *Some*

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considerations of the consequences of the lowering of interest and raising the value of money (1691), Law's *Memoriessur les banques* (1705), Justi's *Staatswirtschaft* (1758), Steuart's *Inquiry into the Principles of Political Economy* (1767). These and other writings of the "mercantile" school are the representatives of symbolism.

THE CLASSICAL SCHOOL METALLISTIC

Among the "metallists" in money are to be mentioned the entire "classical" school beginning with Adam Smith, Ricardo, Senior, Mill and including Walker, Jevons, Keynes, Leroy-Beaulieu, Diehl, Laughlin, Wagner and others. Karl Marx and his followers, as well as to a certain extent the historical and Austrian schools are representatives of metallism.

According to metallists the philosophy of money would consist of the two or rather three following equations.

money=gold

gold=goods

money=goods

But have the nominalists succeeded in overpowering the antitheses? Wagemann thinks that they have not, especially since the "economic theory" of money has not been placed as yet on a firm basis. To this task, however, his own studies address themselves, and we are promised a second volume of the present treatise.

THE LEGAL ASPECT OF MONEY

In the phenomena of money there are two concepts. One is the legal, viz, that the State compels obligations to be discharged through certain media. The other concept is economic. So far as the legal aspect is concerned, Wagemann concedes that Knapp can be accepted by everybody. But the economic aspect of money has been

virtually neglected by Knapp.¹ And his followers, instead of supplementing him, have only rendered the theory untenable. For instance, when Liefmann in his *Geld and Gold* (1916) declares that money is nothing but a psychological abstraction which is even independent of the State and draws its existence solely from the circumstances of exchanges, the theorist bids adieu not only to the problem of value but also to the whole conjuncture of social life.

In mercantile thought, so far as a theory of money is discernible, for instance, in Stuart's *Inquiry*, money is essentially a symbol. But the picture of mercantilism with which students are familiar in Adam Smith's work, namely that money is identical with wealth is really a *degenerate* form of mercantile thought, says Wagemann. The process of degeneration by which a symbol is taken to be equivalent to the fact, the sign to the essence, in other words, the "materializing" of a symbol is psychologically quite a normal phenomenon and has played a great part in the early culture history of all nations, as anthropology teaches us. The concept that money = wealth is according to Wagemann but part of the same consciousness which produced, for instance, the dogma of transubstantiation, the realism of mediæval scholastics, and the doctrine of the State being identified with the person bearing the crown (*L'état c'est moi*).

THE LIMITATIONS OF METALLISM

If the materializing of the symbol turned out to be the extreme to which the mercantilists were running, the danger of metallism has lain in the direction in which the theorist is tempted to consider money as a certain lump (in weight) of gold. Whenever the metallist thinks of money, he can hardly resist envisaging, first, some solid

¹ In connection with this Chapter may be consulted L. Mises' *Theorie des Geldes und der Umlaufsmittel* (Munich, 1924).

piece of metal passing from hand to hand, and secondly, something like a tape or a rod which serves as a unit of measure. For, otherwise he cannot conceive the mechanism by which prices are adjusted.

It must be acknowledged that it is on the metallistic theory that the money and currency as well as note banks of all modern States have been founded. The theory has played the same role in socio-economic life and political science as the atomic theory in chemistry and the theory of ether in physics. But like both these theories, this is only a fiction, says Wagemann, although 'it has been quite fruitful as a working hypothesis.

CHAPTER XXXIX

ECONOMIC LIFE IN THE BALKANS

THE Balkan states represent almost the same stages in economic evolution in which India finds herself at the present day. The rate at which these lands are advancing in modern life is therefore of interest for purposes of comparison with our own conditions.

CONTROL OF EXPORTS

One of the important lessons that the Balkan states have to offer is the manner in which they try to control the exports, whether in the line of facilitating or in that of restricting them. Hungary, which although geographically speaking, is not strictly a Balkan state, but politically, economically and even ethnologically belongs to the Balkan complex, is a case in point.

SPECIAL RAILWAY RATES FOR EXPORTERS

The railways of Hungary, owned and managed as they are by the state, are co-operating with the producers of raw materials as well as arts and craftsmen in the

¹ See the Chapters on the Balkans in my *Politics of Boundaries*.

efforts to find a market abroad. While the Government has by legislation been withdrawing some of the restrictions to exports the railways have introduced a goods tariff such as is especially favourable to exporters. The rates, which affect about 200 articles from poultry, oil-seeds etc., to acids and hardware, have been reduced by 20 to 45 per cent since September, 1924.

Hungary exhibits the state attempts in the control of exports. The people's efforts in the same direction are noticeable in Jugoslavia.

EXPORTERS' CONGRESS AT BELGRADE

The exporters' association of this country met some time ago in Congress at Belgrade together with all the Chambers of Commerce. Their object was to study the "exportability" of the different goods produced in the country. Timber and wood products, cattle and meat products, fruit and alcoholic goods, miscellaneous goods, and manufactured wares constitute five of the heads under which the problem was investigated. The congress is to be held annually and focus the attention of the commercial classes on the possibilities of profitable export.

ECONOMIC RESEARCH

As the control of jute has been growing into the most dire necessity for the people of Bengal it will be of interest to know as to how the Jugoslavian exporters' associations and chambers of commerce have been working. Let us take the cereals, the sixth but perhaps in importance the first item in the list of exports from Jugoslavia. The problem is essentially one of economic research.

The area under wheat, for instance, for the year beginning September 1924 and ending August 1925 is known from official reports to be 11,200,000 bighas. At the somewhat medium rate of one metric ton per 7 bighas the total yield is expected to be 6,600,000 metric tons. Owing

to damages by inundations about 50,000 metric tons have to be taken for lost. From the remainder home requirements have been reckoned at 1,350,000 metric tons. Yugoslavia will therefore be in a position to export 200,000 metric tons in the course of a year. This means an influx of some 800 million dinars (=4 crores of rupees).

The same investigation has been bestowed on other cereals such as barley, oats, corn and beans. From oats alone the country expects from foreigners the sum of 1000 million dinars roughly equivalent to 5 crores of rupees. The exports in all different lines are calculated to be worth 10,000 million dinars (=50 crores of rupees).

These investigations do not constitute the labour of love for "research scholars in economics" but form part and parcel of the business enterprise of money-makers. One wonders if the business instinct of India is oriented to its economic interests in such a self-conscious and realistic manner.

THE QUESTION OF ROLLING STOCK

The problem of export has been acute in Rumania owing to the lack of railway facilities. Rolling stock is not available in sufficient quantities. Producers of cereals and oilseeds have had to bear enormous loss as the home market can absorb the stuff at but inconceivably low prices.

In order to cope with the difficulty the Resitza Iron Works have commenced expanding their operations. They propose to build 100 locomotives a year. This will be the first attempt of Rumania in the line of manufacturing railway engines.

⁽¹⁾ The Resitza concern is a semi-government enterprise. The upkeep of the state rolling stock is its monopoly. By terms of contract with the government the works have been up till now repairing about 200 locomotives and 5000 wagons per year.

COTTON EXPERIMENTS IN HUNGARY

The little states are not content solely with the efforts directed towards industrialization. Each one is trying hard to advance in agriculture and farming as well.

India will have to take note that a new competitor is soon to appear on the horizon of the world's cotton-market. For some time Hungary has been making experiments with cotton cultivation. It is said that the best American quality has been produced. Moreover from 320 to 640 pounds of cotton per tree are available. The country is going to take up the cultivation on a business scale.

STATE AID IN SUGAR

The cultivation of sugar beet has been growing in Jugoslavia on account of state aid. There are altogether eight sugar factories in this country. Down to 1922 the total yield was less than half of the people's need. So more than half of the home demand had to be met by imports. But to day the country is in a position not only to supply its entire need but also to export considerable quantities.

AGRICULTURE PROMOTED BY BOYCOTT

This large increase in the manufacture is due to an enormous augmentation in the amount of raw beet grown by the cultivators. The manufacturers have been encouraging the peasants with large premiums. The cultivators have also been assured a minimum price. All this has been rendered possible because the factories themselves are protected by high tariffs. This is another instance of the great benefit which accrues to agriculture when the government initiates a boycott of foreign goods by protective legislation.

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DYEING AND CHEMICAL INDUSTRY IN GREECE

Greece is industrially in a low stage of development. In chemicals the country has to depend on imports from Germany and Switzerland.

The only mentionable dye-stuff works of Greece are the *Manufactures des Matieres colorantes* in Piraeus. The factory is about 25 years old but is hardly in a position to meet one-third or even one-fourth of the home requirements, such as are represented by the eight cotton textile factories with dyeing installations.

PROTECTION IN RUMANIA

Rumania is preponderantly an agricultural country and has to depend for machineries, tools and implements of all sorts on imports from abroad. The tendency to reduce imports has been manifest in this country for some time as an index to the *swadeshi* movement that is fostered by the government's protective tariffs. But the industrialization has not advanced sufficiently far up till now. So Rumania continues to mark its economic life chiefly by exporting cattle and grain.

GREATER RUMANIA

But like Tchechoslovakia and Jugoslavia, Rumania as it exists today is a veritable war-creation. The new possessions which have come to this state through the peace-treaty include, among other territories, the German-inhabited districts of Transilvania. And these are no less industrial than agricultural in their economic character.

THE FACTORIES OF BANAT

One of the districts of Greater Rumania is Banat. The towns of Banat are dotted over with factories, large and small. Weaving, spinning, laces, embroideries and other lines in the textile industry are the principal features of this region. The government has established at Arad a factory for building carriages and airships.

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In Temesvar the industries of New Rumania are tending to concentrate. Woollens constitute a strong item. Among other things the chief interests represented are shoes, building materials and liquors.

SIEBENBUERGEN'S COTTAGE INDUSTRIES

The other German district is Siebenbuergen. Here also the industrial activities of the people constitute a special feature. Glass, leather, wood products, woollen goods, towels, sheetings and other articles are turned out of the "cottage industries."

But neither Banat nor Siebenbuergen can afford to be economically self-sufficient. So far as goods of *superior quality* are concerned, Transylvania and along with it, Rumania has long to depend on "manufacturing powers."

JUGOSLAVIAN COAL

Industrially speaking, Jugoslavia happens to be the most advanced of the Balkan states. Coalfields constitute some of the valuable resources of this country.

Anthracite, the best class of coal, has not yet been discovered. But for about a generation lignite coal has been being mined. Many of the lignite fields remain yet unexploited.

TRBOVILJE AN INDUSTRIAL CENTRE

The *Trbovljska Premogokopna Druzba* (Trbovlje Colliery Company, with its headquarters at Trbovlje, in Slovenia, has been working with tremendous success. During the last two years the dividend has been declared at 50 per cent. An idea of the magnitude of the concern will be obtained from the amount of share capital which is valued at 50 million dinars (= Rs. 25 lakhs.)

Certain subsidiary industries are run by the company. It owns cement works, lime kilns and brick works. The

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daily output of coal averages 5000 tons. In 1923 the company placed on the market 15,229 tons of cement, 18,610 tons of lime and about 6 million bricks.

CO-OPERATIVES IN BULGARIA

There are 2390 co-operative societies in Bulgaria with a total membership of 398,323. About 8 in every 100 Bulgarian men and women are registered as members of the societies.

The towns are playing as great a part in the co-operative movement as the villages. The societies are to be found in 81 of the 92 towns and 1178 of the 4216 villages that make up the country. The number of urban institutions is 745 constituting about 31 per cent or a little less than a third of the whole strength.

FIVE TYPES OF CO-OPERATION

The Bulgar co-operative societies, whether rural or urban, may be divided into five categories: First in importance are the credit associations and the consumption or housing concerns. Commercial institutions for the sale or transfer of goods, labour or "productive" organizations, and insurance agencies represent the three other groups in descending order of numerical importance.

RURAL AND URBAN CO-OPERATIVES

It is in the villages that creditary concerns on co-operative lines are most popular. Of the 1039 credit organizations in 1921 the villages possessed 940 while only 99 belonged to the towns. The strength of the consumptions or housing societies is on the contrary noticeable in the towns. In 1921 while of all the rural co-operative institutions about 20 per cent belonged to this type the percentage for towns was about 33.

POPULAR BANKS

The credit associations function as saving banks and credit institutes on the plan of Raiffeisen rural banks.

Some of them describe themselves as "popular banks" and "co-operative banks". Others are known as associations of mutual assistance formed with the object of assisting only those who are members. There is at least one such popular bank in 70 of the towns of Bulgaria, and Sofia the capital possesses seven institutions of this class.

CO-OPERATIVES IN BUYING AND HOUSING

Co-operation in consumption groups itself in three different heads: First come the institutions made up of all classes and professions organized with a view to buying articles of daily use at cheaper prices. Then come the associations which cater to the needs of the members for special goods such as bread, meat, fuels, medicine etc. Finally there are the co-operatives which address themselves exclusively to the problem of providing cheap and hygienically constructed dwelling houses. There are altogether 465 co-operatives in this line (207 urban and 258 rural.)

STATE BANKS AND CO-OPERATION

The co-operative movement has been able to go ahead chiefly because the State Banks have been ready to offer the institutions credit on very liberal terms. The National Bank, the Agricultural Bank and the Co-operative Bank—all governmental enterprises have come forward to the help of the co-operatives as a part of the economic policy of the state. The housing societies are particularly favoured by the government. The sum of 70 million levas (about 18 lacs of rupees) has been ear-marked on the present year's budget as credit to be offered to these associations (1924).

CHAPTER XL

SIX YEARS OF "ALLIED" ECONOMIC POLICY (1919-1924).

GERMANY'S COMMERCIAL AUTONOMY

SOME of the economic clauses of the Treaty of Versailles are automatically to go out of operation on January 10, 1925. For the last six years Germany has been according the allies the "most favoured nation" treatment in commercial relations without herself enjoying the same from them. But now Germany is to resume her commercial autonomy. The privileges enjoyed by the articles of Alsace-Lorraine are to disappear. On the other hand the Saar Valley is to enter completely the customs system of France.¹

The coming changes necessitate a reorientation of the allies in regard to Germany. Negotiations have consequently been going on between Germany on the one side and Great Britain, France, Belgium, Japan and Italy on the other. Each power is negotiating independently, i.e. no longer as the member of an association determined to present a "united front" against the common victim.

GOVERNMENT VS. INDUSTRIES IN ENGLAND AND BELGIUM

In regard to Belgium, Germany has been able to create a split between the government and the industrialists. The latter are inclined to give Germany the "most favoured nation" clause while the government is opposed to it.

The same situation has arisen in the England and on a more extensive scale. If Germany gets the "most

¹ De la Blache's *La France de l'Est* (Alsace-Lorraine) (Paris, 1917); Gallois' *La Bassin houiller de la Sarre in Annales de Géographie* (Paris, 1919).

favoured nation " treatment on the British market she will be 'able to compete with certain classes of British goods in a most dangerous manner. The question of unemployment as well as of public finance and fiscal policy cannot therefore fail to be acute.

MANUFACTURE VS. AGRICULTURE IN ITALY

In Italy, again, there is a conflict of interests between different classes of people. The iron and steel magnates want the government to protect the country against German goods. The agriculturists, on the other hand, prefer German manufactures because they are cheaper than *Swadeshi* goods and would facilitate the trade by exports of raw produce.

JAPAN AND GERMANY

The problem of Japan in regard to Germany is comparatively simple. She does not have to fear much economic competition. Both the government and financial circles in Japan are therefore prepared to enter into mutual and unconditioned "most favoured nation " relations with Germany.

THE DAWES SCHEME

Altogether the year 1925 is to see the working of a new phase in the world's economic relations with Germany. Each one of the allies has to discover some ways and means by which it can allow Germany the right to export goods as freely as possible, i.e. deprive itself consciously of a great part of the privileges with which it is armed by the Treaty of Versailles as a victor.

Then, again, the Dawes scheme has been framed on the hypothesis that Germany can pay the reparations only if she obtains the chance to export i.e. sell in foreign lands. Now as France is interested in the reparations it is her interest also to see to it that Germany's goods are available on the foreign markets.

THE ECONOMIC DILEMMA

The situation is complex. If Germany is to be capable of exporting her goods it is necessary that no foreign power should place a discriminating and prohibiting tariff on them. In other words, Germany demands a "most favoured nation treatment" in every land.

On the other hand, Germany cannot easily meet her reparation dues as long as she finds her trade-balance unfavourably affected because of the articles of luxury which, say, are imported from France. She would like to "protect" her market against such goods. So a regular "tariff war" is in preparation.

THE CUSTOMS FRONTIER ON THE RHINE

And here it is necessary to dwell on the economic complexities of that debatable border ground known as Rhineland. The beginnings of an independent Rhineland—a Rhenish Republic—may be said to date back to the summer of 1921. During that period a customs frontier was erected in the Eastern Rhine district. Industrial regions were rent in twain. The Germany under the *Entente* occupation was separated from the Germany that is free.

(a) AGRICULTURE

Great difficulties arose in the way of supplying the occupied territory since the latter is a far greater consumer than producer. For instance, consumption in the Rhineland amounts to 18·8 per cent of the total consumption of cereals and meat in the whole of Germany. On the other hand, its production is as follows :—

Wheat	6·8 per cent	(of the total amount produced in Germany.)
Potatoes, turnips and oats	5·7 „	„

Rye	5·2 per cent	(of the total amount produced in Germany.)
Poultry and oxen	10·5	„
Pigs	8·0	„
Sheep	3·93	„

The territory to the west of the Customs frontier depended mainly on the sale of its wine in the rest of Germany, in which no wine is produced. The region to the east of the frontier is mainly dependent on the Rhineland for the supply of artificial manure.

(b) INDUSTRY

The territories on either side of the Customs frontier had been united by millions of ties of industry and trade. Needless to say how greatly the Customs frontier interfered with the traffic between the producers of iron and semi-manufactured commodities, the manufacturers of machines, wagons and small iron goods, and the dock-yards.

The smelting works for numerous manufacturers of machinery were on the other side of the Customs frontier. A number of blastfurnace enterprises—such as the Rhenish Steelworks, Phoenix, Gelsenkirchen, Niederrheinische Hutte, Gutehoffnungshutte, etc.,—encountered the most serious difficulties owing to the fact that their blast-furnaces were situated partly to the east and partly to the west of Customs frontier.

Of the mining enterprises the firm of Krupp saw its various branches of production torn as under in the following proportions.

Production of pig iron	30 per cent.
„ „ steel	25–30 „
„ „ rolled iron	30 „
„ „ machines	22·7 „

Similarly a large part of the leather and textile industries were cut off from their organic connections with the mainland of Germany owing to the Customs frontier. As regards the textile industries, the weaving-mills of the firm of Krupp, for instance, were situated to the east of the frontier, the dyeing works to the west.

The inevitable consequences were stagnation, the closing down of works and unemployment. In June 1921 there were no less than 193 large concerns working under-time. Among these were 33 manufactories of machinery, 23 metallurgical enterprises, 22 textile manufactories and 8 large blastfurnaces. And these figures do not, of course, include the smaller undertakings.

During June 1921 no less than 52 works were obliged to close down in the Cologne Administrative District. Among them there were :

- 4 large blast-furnaces,
- 11 manufactories of machinery,
- 6 chemical factories,
- 1 leather manufactory,
- 3 manufactories of cigarettes,
- 3 minerals and ceramics,
- 11 metallurgical undertakings,
- 1 manufactory of paper for industrial purposes,
- 1 timberwork,
- 2 water-works, and so forth.

The following figures show the average number of workmen discharged from the factories situated to the west of the Customs frontier :

Wholesale Shoe trade	10 per cent
„ Fats and Coffee trades	15 „
Linoleum and Carpet trades	15 „
Wholesale Tailoring	15 „
„ Leather trade	15 „

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Haberdashery, Woollens, &c.	20 per cent
Manufactories of Wire and Chemicals	50 „
Paper manufactories and Blast-furnace industry.	45 „
Furniture manufactories	45 „
Raw Iron and Steel	10 „
Carrying and Forwarding trade	45 „
Wholesale Dairy produce	65 „
• Transport industry and Wine trade	25 „
Wholesale Iron and Wine industries	35 „
Rolling-mills	10 „
Metal foundries, manufactories of Casks, Vats, etc.	100 „

(c) TRADE

Trade was particularly hard hit. During the total period the turnover diminished in the following proportions :

Wholesale Cloth trade	10 per cent
„ Shoe trade	15 „
Coffee	20 „
Tailoring	30 „
Leather	40 „
Haberdashery, Woollens, etc.	45 „
Paper and Ceramics	50 „
Furniture	55 „
Pig Iron, Steel	60 „
Carrying and Forwarding trade	65 „
Dairy produce trade	70 „
Wholesale Wine trade	80 „
„ Cask and Vat trade	100 „

In many cases the reduction amounted to 20 per cent of the normal sale—in the case of Cologne machine industry it even amounted to as much as 66 per cent. A number of firms had to migrate to the other side of the Customs frontier. The retail trade suffered greatly. The

dilatory tactics of the Customs officials nearly dealt trade its death-blow.

On the other hand, an immense quantity of French articles of luxury was imported into the country. The following are the figures of the imports during May 1921:-

£.

Silk goods and Laces valued at 11 million marks (on June 1st, 1921, the value of sterling was 246 marks per £)	44,715
Leather valued at 25 million marks	101,626
Chocolate and Cocoa valued at 40 mill. marks	162,602
Coffee valued at 10 million marks	40,650
Champagne valued at 10 million marks	40,650
Wine valued at 50 million marks	208,250
Liquors valued at 70 million marks	284,550
Crabs and Lobsters valued at 3 mill. marks	12,195
Methylated Spirits valued at 200 mill. marks	813,000

(d) TRANSPORT

The net-work of railways, roads and water-ways was cut in twain. Reductions of traffic, the closing-down of works, the shifting of the goods traffic, loss of time and unnecessary expenses were the results. Goods traffic was at a stand-still for weeks. This dead-lock stretched from the left bank of the Rhine to Hanover.

Railway stations in which no provision had been made for Customs offices as well as shunting stations, were converted into Customs Houses. Thousands of goods trains, laden with all kinds of goods, were held up for many weeks, thereby obstructing traffic. Traffic over the bridges across the Rhine and elsewhere was brought to a stand-still owing to the complicated measures entailed by the erection of the new Customs frontier.

The entire traffic in Western Germany goes from north to south along the two main railway lines on either

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bank of the Rhine. Both these lines were shut to traffic on the western side of the Customs frontier. Only a small mountain line from Hagen to Siegen remained, and this was insufficient.

In May 1921 the goods traffic had been reduced to the extent of 60 per cent. No less than 45 per cent. of the transport workers were discharged, and the remainder was partly also without work. The loss incurred by the Transport Insurance Companies amounted to 75 per cent.

(e) CUSTOMS

The incidence of the new Customs duties was not determined by the conditions of German traffic but by economic interests of the conquerors.

For several industries the new Customs duties were prohibitive, *e.g.*, for the metalsmelting industry.

In addition to the Customs duties a statistical duty was levied on every single commodity. Guarantees were often required to be deposited in cash, and were frequently lost. Commodities not liable to duty were often stopped in transit. The Customs duties were frequently levied twice. It was by no means unusual for goods to be as long as five weeks on the road. Applications addressed to the Customs office at Coblenz were at first attended to only after four or five weeks had elapsed ; later on only 2 or 3 weeks were required.

(f) OFFICIALS

The Customs House functioned mainly with the object of cutting off the Rhineland from its natural markets. Traffic was only maintained to the extent necessary for carrying out such political plans.

The Customs House officials had no knowledge either of the German or of the French Customs regulations ; they had no knowledge of commodities and did not know

which commodities were dutiable and which not. They worked only for a few hours every day, interpreted the regulations in a wholly arbitrary way, let goods be ruined or stolen, and engineered a system of profiteering on a large scale. Exchange bureaux were opened in Ems and Wiesbaden, where a roaring trade often of a questionable character was done with import and export permissions.

The entire Customs apparatus served the purpose of developing a widespread and well-organised system of trade spying. The German Customs officials were compelled to act against the interests of their own country. If they refused, they were visited with severe punishment.

For instance, Customs Director Mann, had been formerly director of the Main Customs House in Kaiserslautern. He was nominated Director of the office at Ludwigshafen, but declined to accept the post. He was sentenced to three months' imprisonment and a fine of 16,000 marks.

ECONOMICS OF THE SAAR VALLEY (a) MINES

In 1913 the output of the Saar mines under German administration amounted to 14 million tons. 70,000 workmen were employed in the mining industry, more than one-fourth of whom possessed their own dwelling houses. In so far as the coal was not consumed in the Saar Basin itself, it was exported chiefly to parts of Southern Germany situated on the right bank of the Rhine.

Under the *Entente* regime, at first it was intended to hand over the mines to private enterprise, but finally the French authorities decided in favour of State exploitation. For they had in view the accomplishment of important political aims in connection with the referendum to be organised in later years in accordance with the provisions of the Treaty of Versailles.

In order to promote this object, a large number of French political officials were appointed by the Administration of the Mines. The economic result of their activity has been to render the mines unremunerative.

To-day the output amounts to 10 million tons a year.

The monthly quantity of coal supplied by Germany for reparation purposes is 1,700,000 tons. The French markets are unable to entirely absorb this quantity. For this reason the output of the Saar mines has been limited. Whereas the mines in the Ruhr region worked over-time, those in the Saar-Basin worked under-time. The French endeavoured to bring pressure to bear on the German labour organisations with a view to obliging Germany to purchase 200,000 tons of Saar coal every month.

The German blast-furnace industry in the Saar Basin was compelled to hand over part of its share capital to the French, since the latter threatened that otherwise no further coal would be supplied to it.

The system of paying labour-wages and the salaries of officials in French currency has been introduced. The wage-earners and the population of the Saar Basin at large are suffering acutely from the effects of the double currency.

The Administration of the Mines carries on an intense propaganda in favour of the cultural *gallicisation* of the region. The Mining School in Saarbrücken, Preparatory Mining Schools and the schools for masterminers in Luisenthal, Sulzbach, Neunkirchen, and Guttelborn are utilised for this purpose.

The French language is taught in all these schools, and from the point of view of the number of lessons given, it is even placed on an equal footing with the science of mining. French lessons have also been everywhere

organised for the officials; and teachers at the Preparatory Mining Schools, together with their families, are sent to France in order to take part in vacation courses there.

(b) FORESTS

The estate Armada (85 hectares) and the estate Rheingrafenstein (73·5 hectares) have been sequestrated, and French agricultural schools have been erected on both. The following area has been sequestrated for military purposes :—

For aerodromes	2,924	hectares (1 hect.	
		=2½	acres)
„ target practice	3,800	„	
„ playing grounds	256	„	
„ training camps and			
shooting stands	1,858	„	

Further training grounds extending over 5,900 hectares were occupied. In 1921 this occupation lasted two months.

55,000 hectares of hunting grounds have, likewise, been sequestrated.

Great climatic damage may be wrought, so fear the Germans, and great injury inflicted on agriculture and vineyards alike, if the flowing off of the water should become dangerous owing to the cutting down of forests on the hills such as overhang the cultivated soil of the valleys.

In order to strengthen her influence with the rural population, France has founded the agricultural training College in Mayence as well as the Chamber of Agriculture for the Saar Basin.

(c) ADMINISTRATION

By the terms of the Peace Treaty the Saar Basin was placed under the protection of the League of Nations.

It was to be administered under its control by a neutral Government Commission in the interests of Germany for a space of 15 years, at the end of which a referendum is to take place.

Should this referendum prove favourable to Germany, the Saar region is then to be handed back to her. It was provided by the Treaty that France should meanwhile have the right to exploit the Saar mines without let or hindrance.

The Government Commission was to fulfil the usual duties of a public administration, in co-operation with Parliament. Peace and order were to be guaranteed by means of a *gendarmérie* recruited from amongst the inhabitants.

Instead of this the Government Commission is entirely dominated by French influence and pursues a pro-French policy. It relies for its support on the anti-German elements which, it must be remembered, do exist among the Germans of the Rhineland.

The Parliament foreseen by the provisions of the Treaty of Versailles was not summoned until three years has elapsed; its functions are purely consultative, and it is unable to exert any influence on the conduct of affairs.

It is easily explicable why the Dawes scheme takes it for granted that the Saar Valley belongs to the "economic system" of France.

FRANCO—GERMAN BUSINESS RELATIONS

Altogether, however, so far as the trade relations between France and Germany are concerned it is interesting to observe that Versailles has served but to reverse the conditions of the Treaty of Frankfurt which brought the Franco-Prussian War to a close (1871). Down to

1914,—partly through the economic clauses of that instrument—Germany was selling more to France than she bought from the latter country. Since 1919, on the contrary, France has been delivering more to Germany than she imports from the other side of the Rhine.

In any case several new conditions make it imperative that the Franco-German business relations should continue to develop more and more intensively. The overtures are likely to be mutual, although Germany has greater "staying power."

In the first place the return of Alsace-Lorraine to France has deprived Germany of the most important part of her resources in iron ore. On the other hand, notwithstanding the command over the Saar industries France is not in a position to utilize all the iron she produces within French boundaries. Naturally therefore France must have to find a market for iron in Germany, the country that needs this mineral most for her metallurgical works.

NOT "PURE POLITICS"

And here it were well to note that not everything that has happened between France and Germany since 1919 or even since the occupation of the Ruhr was "pure politics". Neither has France been systematically pursuing the long studied policy of "revenge" upon Germany nor has the German nation all this time been actuated exclusively by sentiments of nationalism and love of father-land. A good deal of the last few years' happenings can be accounted for solely by economic conditions that have obtained between the two peoples for about a generation or so.

VERSAILLES INCONVENIENT TO FRANCE

The Treaty of Versailles, economically speaking, has not been, curiously enough, very convenient to France,

During the war her industries in the iron and steel line have grown enormously. The annexation of Lorraine has served but to create complications.

In the first place, Lorraine can only add to her strength as a metallurgical power but has not brought along with it the market for iron and steel wares. And in the second place as a business proposition Lorraine is a "white elephant", so to say, as long as the supplies of coal and coke are not available in sufficient quantities, as Pinot makes it quite clear in his statements on the situation. At the end of the war in *Le Comité des Forges de France* (Paris 1919).

On the other hand, Germany has continued to keep her market for iron manufactures as well as the coal and the coke regions in the Ruhr Basin. But she lost her ore resources which she has since been compelled to buy at very high prices on account of transportation charges from Sweden and Spain.

MARRIAGE OF COAL AND IRON

Previous to 1919 the Rhine-Ruhr and the Saar constituted with Lorraine a unified industrial complex. That complex was cut as under by Versailles. But both France and Germany,—the industrial millionaires of these countries, of course,—have ever since been feeling the need for marrying over again, some how or other, the Ruhr coal to Lorraine iron.

That is why all these years the delivery of coal has occupied the greatest energy of diplomatists. In 1921 began the Franco-German conferences between "experts." At one of these, France was represented by Lubersac and Germany by Stinnes. In another conference Rathenau represented Germany while Loucheur France. These were attempts at friendly understanding with a view to bring about the payment of "reparations in kind." But

these understandings did not appear convenient to British trade and industrial interests.

RUHR WAR AN ECONOMIC FAILURE

So France started on annexing Ruhr to her economic system (1923).

It is not without reason that people attribute Poincare's adventure to the overture of the French steel company entitled the *Comite des Forges*. The urge behind the move was none other than the desire to unite coal with ore.¹

Industrially speaking, not every German was at heart unhappy over the incident. Nay, Stinnes, the industrialist whose interests in the Ruhr were most at stake was suspected early in 1923 as having tried to push the French annexation of Ruhr to Lorraine, in other words, as being a "traitor".

But the presence of French troops on the German soil has thrown the real economic issues into the background. Politics and patriotism got a fresh lease of life on the side of the Germans.

The union of Ruhr coal with Lorraine iron has gone farther away than ever from the field of actualities.

The military occupation has failed to produce the desired marriage of coal with iron. Hence the new series of economic negotiations between Germany and France.

FRANCO-GERMAN INDUSTRIAL ENTENTE

British industrial interests are opposed to an economic entente between France and Germany. Previous to the war Great Britain's iron and steel industry had to suffer on account of the lack of iron ores and Germany had overtaken her in the race. It is not convenient for her

¹ Pinot's book cited in the text comes down to the peace-treaty. It has to be supplemented by Levainville's *L'industrie du Fer en France* (Paris 1922).

now to allow Germans to become more powerful by allying themselves with French industrialists.

As long as German coal is separated from French iron it is possible for Great Britain to buy the coal from Germany quite cheap and sell it to France rather dear. This is another reason why the Franco-German attempts at mutual understanding since 1921 have failed to satisfy the British mind.

Finally, on the world market Great Britain has already a powerful competitor in the United States. She has to stand the competition of France and Germany also as single units. But should France and Germany happen to be united the conditions would become almost "impossible".

BRITISH INTERESTS AT STAKE

Several serious economic problems will have to be faced by Great Britain. First, she will have to buy iron ores at a higher price than she pays at present. Secondly, the French market for coal will be closed to the British mines. Last but not least, the prices of Franco-German goods will be reduced on foreign markets with the result that Great Britain will be compelled to reduce her prices too or to retire from the field. In any event the competition can but lead to factories going out of work, unemployment and so forth.

Public opinion in Great Britain is therefore getting nervous over the contemplated *entente* between French and German industries.¹

¹ The efforts at an economic *rapprochement* between France and Germany may be followed to a certain extent in *Deutschland und Frankreich, Ihre Wirtschaft und Ihre Politik* (Berlin 1924) edited by Kuczinski. The volume contains papers by such distinguished persons as Gide, Brentano and others.

For the nationalistic French interpretation see Gignoux's *L'Après-guerre et la politique commerciale* (Paris 1924).

See the chapter on "War-Spirit Abroad" in my *Politics of Boundaries* for an analysis of the international relations from the political standpoint.

CHAPTER XLI

THE DATA OF INDIAN INDUSTRIALISM. 1

CONFLICTING CURRENTS IN THE INDUSTRIALIZING

IN the processes by which India is getting industrialized one can notice today two marked tendencies. Each of these would, however, appear to be in conflict with the other.

In the first place, there is the *swadeshi* movement. About twenty years old as it is, the movement embodies two fundamental processes operating simultaneously and side by side. The boycott of English goods from the Indian market is the first and basis item. The next phenomenon in this movement is the establishment of Indian industries on modern lines ; no matter whether the scale be large, medium or small. The conscious aim of the *swadeshi* is to prepare the Indian people up to a stage at which it can efficiently function as a more or less self-sufficient and self-determined economic agency in the world's system of creative materialism.

Secondly, and apparently almost diametrically opposite to this movement, there has been at work the tendency on the part of Great Britain itself to promote modern industries on Indian soil. In this instance the object is entirely different from what the Indian national industry movement seeks to achieve. For, Great Britain's motive in industrialising India is to be assured that in the coming war of the British Empire against Asian or Eur-American rivals its Indian Dominions be adequately provided with the "key-industries". And what else can the so-called key-industries of India be except

1 *Vide* the present author's " Die Industrialisierung Indiens" in the *Zeitung des Vereins deutscher Ingenieure* (Berlin, November 1924).

such as may help forward the military, naval, aerial and commercial equipment of the British race at a moment's notice in the South-Asian theatre of operations ?

A TECHNICALLY DEVELOPED INDIA

Politically speaking, then, there are two different industrializations going on in India at the present moment. But, however antagonistic the politics of this industrializing may happen to be from two conflicting platforms, students of industrial chemistry, and engineering as well as finance, economics and social science will not have to look far and deep in order to be convinced that there is but one direction along which India has been moving and is bound to move for some time to come. And that is the steady progress of the Indian people and India's material resources towards a technically developed and scientifically organized level of modern economic power. In other words, objectively considered, the *swadeshi* and the British efforts instead of appearing as antithesis should rather deserve recognition as co-operative ventures in certain problems of economic dynamics.

THE MODERN INDUSTRIES : YOUNG AND OLD

Not every "now" factory or workshop in India, however, owes its inspiration to the *swadeshi* ideas of 1905 or to the British "key-industry" policy of the Great War period (1914-18). The beginnings of modern industries in India, what with English, what with Indian capital and direction, have to be traced in certain instances back to 1870, nay, to about 1850.

The oldest of the "big industries" of modern India are represented by the cotton, jute and woollen mills. As latest members of this class India can count today several representatives of "heavy industry", namely, iron and steel works.

THE NEW INDUSTRIAL GEOGRAPHY OF INDIA

As is well known, cotton industry has its principal centre in the Bombay Presidency. The woollen works happen to have found a home chiefly in the United Provinces. Jute industry is localized in Bengal.

The industrial geography of India has been renovated in recent years owing to the founding of iron and steel mills. And these located as they are at Jamshedpur, Kulti and Assansol, have served to add to the economic importance of Bihar. Mysore is at present perhaps the only state outside of British India where iron and steel are manufactured according to modern processes.

Each of these iron and steel centres has been functioning as the magnet for subsidiary and waste product industries. Workshops for the manufacture of screws, nails, tools, implements; agricultural machinery, etc., have sprung up in the neighbourhood almost as evidences of industrial "ecology." Altogether, complex ganglia of life and culture are taking shape in new towns and cities whose importance in Indian history can be properly envisaged only by those who have the imaginative memory to understand the beginnings of modern Lancashire, Belgium or Rhineland.

Manganese is mined in the Central Provinces which possess nine undertakings in this line. There are four manganese works in Mysore and two in Bombay and Madras.

Chemical and pharmaceutical works have been in operation for some time in Bombay and England. Heavy chemicals such as sulphuric and nitric acids are manufactured in these establishments. There are cement works in Assam and the Central Provinces. Glass is manufactured in the Punjab, the United Provinces, Bombay as

well as in the suburbs of Calcutta. Tanneries have been operating in Cawnpur, Madras, Bombay and Calcutta.

The pencil factories of Madras and Bengal are now well known. Bengal and the Central Provinces have started several porcelain works. Enamel, soap and other chemical products have found a strong centre in Calcutta while the perfumeries of Bombay have won considerable recognition.

The number of paper-mills have been on the increase. They have already struck their roots deep in Bengal, the United provinces, Orissa, Assam and Travancore. Match factories seem to have become an all-Indian phenomenon, although chiefly as a "small industry" proposition.

Sugar industry has also been getting modernized. Cane-sugar is manufactured in 8 factories of Bihar (Sahabad, Champaran, Saran and Muzaffarpur).

The United provinces possess 2 sugar-works, the Punjab 2, and Madras 5. There is one at Cossipur near Calcutta. The total number of all sugar mills in India is 31.

INDUSTRIALISM IN THE INDIAN STATES

In the remaking of India's industrial-geography, the "Indian states" constituting as they do a third of her population and a fourth of her territory, have also been contributing their mite. The data of Indian industrialism cannot be complete without an account of the achievements of the people in these states.

In November 1923 there was an exhibition held at Poona. Cotton goods came from the factories of the larger states such as Gwalior and Indore. The latter made also a good show in glass while the former in ceramic products. Glass constituted a speciality likewise of the little state of Aundh. The agricultural machinaries

manufactured in Aundh did not fail to attract the notice of the visitors.

There are 29 spinning and weaving factories in Gwalior, all equipped with steam-power. Steam operates likewise the oil, soap and flour works. The leather and porcelain factories as well as the state printing press make use of electricity as the motive power. Gwalior has been developing, further, in the stone, cement and mica industries.

The petty state of Raepipla in Bombay Presidency is reported to be making "experiments" with motor-ploughs. Another petty state, Kotah, is running a glass factory with a capital of some 4 lakhs of Rupees. An oil-mill is already on the go and the cement factory and a spinning mill are in contemplation.

Among the most highly developed of all Indian states and in fact in all India is to be mentioned Mysore. Modern industries began here with the present century, and almost all as state enterprises. To lay private undertakings in different lines are to be regarded as the rule. Mysore has already been mentioned in connection with iron, steel and manganese. One should notice also the cotton and woollen mills in the list of the larger Mysore industries. It may be remarked *en passant* that up till now Mysore has attempted consciously to learn from the United States and Japan in her industrial enterprise.

Another state that promotes the industrialization of India in a deliberate manner is Baroda. Textile and chemical works deserve prominent mention. Here as in Mysore the new industries owe their origin to the government's pioneering activities. But today practically every factory is a private concern. The state functions at present solely as research and investigation bureau for the citizen-capitalists.

DISTRIBUTION OF FACTORIES AND INDUSTRIAL WORKERS

The geographical data of Indian industrialism can be grasped likewise from a picture of the distribution of modern factories and working-men.

In 1919 there were 5952 factories in all India. Of these 640 belonged to the Indian states, Baroda alone claiming 203. The working men and women numbered 1,367,136. There were about 290 hands employed per factory. In the Indian states the average employment was lower, namely, 140.

Of all the hands nearly 40 per cent were employed by the textile industry. The cotton mills had 307,000 and the jute mills 276,000.

The number of joint stock enterprises in all India in 1920 was 3605. Of these about half, precisely 1742 belonged to Bengal. Bombay possessed 740; Madras 435 and the United Provinces 159. Of the Indian states Mysore had 79, Baroda 41, Gwalior 30, and Indore 18.

Bengal possessed $16\frac{1}{2}$ per cent of all the factories in India. There were 432,515 hands employed in its nearly 1000 factories. The number of working men and women in Bengal was one-third of the total factory hands in India.

of her

Coal is mined almost exclusively in Bengal, Bihar and Chhota-Nagpur. There are 196 collieries in these regions in 1919.

Engineering works were distributed in the following manner: 105 in Bengal, 24 in Bombay, 16 in Bihar and Orissa; 9 in Madras and 7 in the United provinces. The total employment was nearly 500,000. Then there were 70 railway and tramway works employing about 90,000 hands while the 10 dockyards employed 16,000.

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Mica was mined in 19 centres in Behar. Employment 8,675.

Of the larger printing works Madras and Bombay each had 29. Bengal possessed 21 and the United Provinces 10. The average employment was 654.

The 3 paperworks in Bengal employed 4479 and the 3 in Bombay 600 hands.

Bengal had 8 tobacco works, Bihar 4 and Madras 3. Total employment 5,028.

The sugar factories were 44 in number, distributed over Bihar, the United provinces and Madras. Total employment 9,562.

There were 84 oil-mills in Bengal with an employment of 3,470.

Rice mills were distributed as follows: 135 in Madras (employment 7,694) 108 in Bengal (employment 4,503).

The distribution of flour mills was as follows: 13 in Bombay, 10 in the Punjab and 9 in Bengal. Total employment 3,857.

Bricks and tiles were manufactured in Bengal in 107 works; in the United Provinces in 38, in Madras in 31, in the Punjab in 23 and in Bombay in 21. Total employment 21,088.

There were 42 stone works in Bihar, 8 in the United Provinces 3 in Rajputana and 1 in Central India.

Bihar, Bengal and the United Provinces each had 3 porcelain works. The nine factories employed 4,824 hands.

There were 64 silk factories in Bengal, 2 in Kashmir and 2 in Bombay. Total employment 7,963.

There were 5 factories for carpets and shawls in the United Provinces 8 in the Punjab and 9 in Kashmir. Average employment 451.

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There were 13 rope works in Travancore, 11 in Bengal and 6 in Madras. Total employment 5,630.

There were 55 leather works in Madras, 18 in Bengal, 15 in Bombay and 10 in the United Provinces. In these works 13,619 hands were employed, giving an average of 139.

There were 55 lace works in Bihar and 24 in the United Provinces. Average employment 73.

Kerosene tinning was done in 8 factories in Bengal, Madras and Bombay each had 7 works. Average employment 319.

SMALL, MIDDLING, AND GIANT ENTERPRISES

The above statistics, while indicating the new industrial geography of India, will not have failed at the same time to give an idea of the average size of the works in terms of the hands employed. A few more figures for 1919 are here added in connection with the size question.

There were 16 artillery works of the government. Total employment 27,000.

There were altogether 13 chemical works with an employment of 3,000 and 26 dye and paint works with 5000. Glass was manufactured in 10 factories employing 1,422 persons.

Small cutlery works were 7 in number employing about 1100 hands. Exclusively were employed in 46 metal works. Modern carpentry accounted for 11 works with an average employment of 100. In 31 carriage building works 4,267 persons were employed.

There were 15 coffee-works with an employment of 4,066, 19 breweries with 2,307 and 15 distilleries with 1445.

The tea-plantations (117 in Bengal, 36 in Assam and 9 in Madras) employed about 700,000 hands.

It is necessary now to define more precisely the words, industrialism, industrializing and industrialisation, in so far as they are applicable to India at the present time. The question may be more precisely asked : In what stage of economic evolution do the Indian industries find themselves ?

An examination of the factory outfit, capital invested and technical organization will furnish the concrete answer to this question. Suffice here to mention solely certain instances in the line of capital as being perhaps the most positive index to the kind and worth of business concerns. Of the 1000 factories in Bengal, be it noted incidentally, steam operates 203 tea-works, 182 collieries, 128 rice-mills, 72 oil-mills and 49 jute-factories. Oil-engines are used in 96 works, gas-engines in 11 and electric power in 244, of which 99 are printing presses, 17 auto-works and 10 rice mills.

The year 1923 saw in Mysore the founding of 32 new establishments. The total capital invested in these undertakings amounted to about Rs. 500,000. This may be taken to be more or less the norm for all years and all provinces and states. One comes altogether to an average of, say, Rs. 15-20,000 per every new industry comprehended in the *swadeshi* movement. In other words, not many of these *swadeshi* industries have found a place in the list furnished above.

Statistically speaking, the *swadeshi* industrializing implies in India, so far as it lies in Indian hands, nothing more serious than what Germany, France and other countries in Europe were in general used to about 1870-85. These are the "small industries" which have become all but curios in advanced lands or survive in certain peculiarly adapted lines and are to be met with chiefly in those young states of the Western world which, like India, are just

beginning to feel the impulse of new materialistic ambitions.

Situated as Young India happens to be today in the cultural and economic perspectives anything higher is out of the question for its most ambitious stalwarts. The goods that are generally on view in the stalls of the *swadeshi melas* or exhibitions held periodically in different parts of the country constitute the products of this self-conscious materialism, nationalistic as it is. In the economic geography of the contemporary world the Indian sub-continent would thus figure as but a huge experimental station for small industries. And for all this, however humble for the time being, mankind is indebted to the ideas of 1905.

But the data of purely Indian industrial achievements are not exhausted with the *swadeshi* efforts of the "patriots" and nationalistically minded business adventurers. Not all the larger factories mentioned above and in the previous section are in British hands.

The cotton mills which are financed exclusively with Indian capital and directed almost exclusively by Indian brain certainly lie considerably outside of the Rs. 20,000 sacle. Some of the chemical and pharmaceutical works likewise are comparatively large establishments, the embodiments of 5 to 25 lakhs of Rupees and would not by any means be called "small industries" except by those who are used to manipulating the giant factories of Eur-America and so on.

Lying, as this category does, between the smaller and the giant industries, it may be described as representing the middling or medium type of India's industrial undertakings. Capitalism as a power for good or for evil is already quite an established and orthodox force in Indian economic life such as it is represented by persons of the Indian races.

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So far as giant industries are concerned, Indian industrialism even in its present stage can count upon at least one that would stand the highest world-test in the amount of capital invested. The *Comite des forges* of France and *Hugo Stinnes G.M.B.H.* of Germany have their Indian peers in the Tata Sons Ltd. of India. The total capital of the Tata concerns has reached 37 crores of Rupees.

It is well known how the Tatas made their *debut* with textile works and possess today factories in spinning and weaving lines at Nagpur, Kurba, Ahmedabad and Parel. Their iron and steel works command a world reputation. The Tata Hydroelectric, Andhra Valley and the Tata Power Co. are three electrical establishments that have been in operation for several years. A fourth is under construction, the Konya River Power Co. The Tatas have, besides, established a cement factory in Porbandar and an oil mill in Erna Kulam (Cochin).

INVESTMENTS, INDIAN AND FOREIGN

On the question of investments some exact figures will tell their own tale. While Indian capital has but been attempting to master the alphabet of high finance, the foreign investors will be found to have been playing the master-role in the industrializing of India.

The capital invested in Calcutta Soap Works is 5 lakhs of Rupees. The Bangaluxmi Cotton Mill is worked at a capital of 18 lakhs.

The Bengal Chemical and Pharmaceutical Works are operated with a capital of 25 lakhs.

The Sassoon United Mills of Bombay possess a capital of 10 crores. The same limit has been reached and exceeded by the Tata Iron and Steel Works. The Tata Power Co., is operated with 9 crores and the Tata Hydro-

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electric Power Supplying Co., with 3 crores. The Tatas possess a sugar corporation which is operated with 5 crores.

Among the 85 jute mills there is only one Indian concern. The proprietor, Hukum Chand, has invested in it a capital of 80 lakhs.

These are few instances of *Swadeshi* in finance.

Most of the other jute mills are operated with capital ranging between 20 and 25 lakhs on the average. The Howrah Jute Mills command $56\frac{1}{2}$ lakhs while the Orient and Anglo-India each 1 crore.

The United Steel Corporation of Asia command 20 crores, Bengal Iron Co. $11\frac{1}{2}$ crores.

The Buckingham and Carnatic Mills (Cotton) of Madras are operated with $2\frac{1}{2}$ crores, the New Victoria Co. (woollen) of Cawnpur with 5 crores, Agra United Mills with $1\frac{1}{2}$ crores, The Ganges Manufacturing Co. with $1\frac{1}{2}$ crores, the Consolidated Tea and Lands Co. of Assam with 3 Crores, the Mysore Gold Mining Co. with $91\frac{1}{2}$ lakhs.

In 1922 there were registered 72 joint stock concerns in India. The total authorised capital was about 15 crores. Average 20 lakhs. The promoters were mostly non-Indian. Without trying to be dogmatic, perhaps this foreign average may be set against the normal *Swadeshi* average of 20,000. That is, Indian capitalism should seem to be almost 1/100th as strong as British capitalism in India.

This comparison must not be taken too literally. It does not at any rate imply that the amount of British capital invested in India in all forms is 100 times as much as all Indian capital resources put together. In Jadu Nath Sarkar's *Economics of British India* (Calcutta 1917) there is an interesting calculation which says that in 1913

the amount of foreign capital invested could be fixed at something above 518½ crores while that to be traced mainly to Indian sources could not account for more than 24½ crores.

BANKING IN INDIA

The number and condition of the banks tell the story of India's industrialism from another, fundamental, standpoint. There are at present but 15 exchange banks and 25 joint-stock banks in India.

Most of these are foreign banks, *i.e.*, the proprietors, shareholders, directors and managers are non-Indian. Some of them are incorporated in England and tell their capital in pounds sterling. Of course a great deal of the foreign business conducted by "Indian" export and import traders passes through these institutions.

It is difficult to make out a list of purely Indian concerns. There is a lot of banking done on mediæval methods. Modern banking under Indian direction is responsible perhaps for 33 institutions each with capital between one and five lakhs.

The "paid-up" capital of the Imperial Bank of India amounts to something above 5½ crores, that of the Central Bank of India coming to about a third of this figure while the Bank of India is run at a paid-up capital of one crore. These are the highest credit institutions in India. The Central Bank of India is a Tata concern.

Branches of banks are few and far between. The Imperial Bank of India, a government institution, is not authorized by charter (1920) to open more than 100 offices in different centres. But already some 150 branches have been started in response to the growing demands of trade. The Central Bank of India does not possess more than 15 or 20 branches. Altogether, the absence of credit facilities is an outstanding feature in contemporary

Indian economic life. By way of comparison, be it noted, the Midland Bank of London operates 2200 branches in Great Britain and Ireland, and the Barclays 1,700.

THE POWER OF INDIAN LABOUR

The previous question viz. that in regard to the magnitude of industrialism, may be worded in another form, thus : To what extent has this modern industrial complex already struck its roots on Indian ground ? One index to this is furnished in the labour-movements, still quite young and not fully self-conscious as they are. The power of Indian industrialism is registered by the fact that on the average about 2,000,000 working men and women have learnt to go out on strike every year.

And what do the Indian hands and feet seek to accomplish by wielding this weapon ? Nothing more nor less than what the working men and women of adult-industrialized countries in Eur-America claim from their employers, namely, shorter hours, higher wages, and better housing and other conditions of work.

It is to be understood that these movements of the industrial workers of India are not directed exclusively against the foreign employers, for example, the proprietors of jute factories and collieries in Bengal, tea-works in Assam and Bengal, woollen-mills in the United Provinces and Madras and so forth. The proprietors of cotton mills in Bombay, although they are Indian, are equally vulnerable to these labour attacks. There are not many instances where the race, patriotic, political or nationalistic questions have affected the relations between the employed and the employer. The labour situation in India is governed fundamentally by economic considerations. And the explanation is quite simple.

The smaller industries run on the Rs. 20,000 basis may perhaps be left out of the present consideration. The

number of hands employed in them is not large nor is the question of factory-management and "labour-conditions" acute.

But the middling and the giant industries, no matter whether *swedeshi* or foreign-controlled, have each a labour problem. The Tata Iron and Steel Works employ about 25,000 men, the Hukumchand Jute Works 5000, the cotton mills have an average of something over 1000, these are purely Indian concerns. The average employment in the jute works is about 3500.

The government ordnance works employ on the average about 1,700 hands each. More than 100=150 is the average in several industries. In fact, we have seen that the average for British India is 230, and the "states" 140.

While in every instance the figures should be taken approximatively, one can notice, at all events that one has to deal here with no negligible numbers. The situation in Japan and Italy, nay France, is not more complex at least so far as single factories are concerned. The number of such works and consequently of the total working men and women, may be larger in these countries than in India, but the problems of labour management per factory as well as of labour reactions to the employers and managers are identical. Such a question as that of the "I. W. W." (Industrial workers of the World) does exist in an international sense i.e. on a world-wide plan.

But as yet labour cannot function as a "great power" in Indian public life. The very number speaks against that. It has been pointed out that the industrial workers are to be counted at such a small figure as 1,376,136. In a population of 320 millions the proportion is almost infinitesimal. But when all working men and women were taken into consideration including the railway men, sailors

miners, tea-plantations men, artisans and workers both skilled and unskilled not listed in the 6,000 factories mentioned above, not more than 10 per cent of the entire population should be regarded as belonging to this class. It would still be very small compared to the relative numerical strength of the organized industrial workers in Great Britain, United States of America Germany and France.

LABOUR VS. CAPITAL IN INDIA.

How are the demands of labour being met in India ? It is well known that the conditions of the International Labour Convention regarding the hours of work per week have already been accepted by the Indian legislature, although the eight-hour day has not yet been legalized by Great Britain, United States of America, Germany and other industrial powers. To this extent India has shown herself quite up to date in the latest findings of industrialism, perhaps a little too early ¹.

Much remains, however, to be accomplished in this line. A maternity bill is being pushed by Mr. N. M. Joshi, a labour leader with the object of providing certain benefits to working women during, before and after confinement. But it has no chances of being carried through owing among other reasons to the opposition of the mill-owners.

In a letter addressed to the government the Bombay Mill owners' Association have declared their agreement with the former in the matter of opposition to the bill. They urge that public opinion is not yet strong on this question and that it would be difficult to supervise the

¹ It must be remarked, however, that in the progressive countries the eight-hour day has been more or less an established fact (on account of the activities of the working class) even without legislation. But compare Fitch's *causes of Industrial Unrest* (New York 1924) for American conditions.

scheme. There is likely to be evasion on both sides, it is alleged, even when the scheme is restricted to highly organized industries. Another reason is to the effect that labour is not organized enough. Finally, as the number of women doctors is inadequate, it is said that it would be difficult to provide medical aid as required by the terms of the bill.

Arguments such as these might have been heard in Europe about a generation or so ago. It has to be noted that the Indian government does not yet know of a compulsory universal and free education law. These considerations will serve to indicate the limits of power achieved by Indian labour up till now and at the same time to mark the stages behind world industrialism at which India finds herself today. The Lines of advance in economic development, will at any rate, be found to be the same for India as for the pioneers of modern life.

One has to observe, further, in this connection that industrial insurance is still unknown in India. The working men and women are not protected against accident, sickness or old age. Moreover, the very first "trade union bill" has become law only towards the beginning of the current year (1925).

The mill owners of Bombay, be it repeated, are not Europeans but Indians. They do not evidently orient themselves to the Indian industrial workers in a nationalistic or patriotic manner, i.e., in a way different from that in which the English employers do. The Labour force of India, consequently, can hardly afford to make distinctions between the Indian and the foreign capitalists. It is to capital as much, i.e. capitalism as an agent in the contemporary creation of values that the mass of Indian industrial workers, as another great agent, is learning to attitudinise itself.

INDIAN LABOUR JOURNALS

Indian labour has been trying to become self-conscious. There is already an All-India Trade Union Congress with its provincial branches and annual sessions. Thirty years ago there was but one labour journal, the *Dinabandhu* (Friend of the poor), in Gujarati, conducted by a philanthropist patriot, Lokhanday of Bombay. Today one can name about a score, published in various Indian languages as well as in English. Some of them at least are conducted by the workers themselves without the backing of the *intelligentsia*.

In Marathi there is a fortnightly, *Kamgar Udaya* published by the Central Labour Board (Bombay). The Marathi weekly, *Kamkari*, is likewise a Bombay publication.

The *Majoor Sandesh* is a weekly in Gujarati, published at Ahmedabad. At Cawnpur appears the *Mazdoor* twice a week in Hindi. The *Shramik* of Calcutta is a weekly appearing in two editions, Bengali and Hindi.

Several journals represent the interests of the railway men and these seem all to be conducted in English. The *Indian Labour Journal* is a monthly, published by the Bengal-Nagpur Railway Indian Labour Union, from Santragacchi (Bengal). The Great Indian Peninsular Railway Staff Union publishes the *G. I. P. Union Herald* twice a month from its head-quarters at Bombay. The North western Railway Union publishes a weekly at Lahore. The *Weekly Mazdoor* is published at Lucknow by the Oudh and Rohilkund Railway Union. The *Railway Guardian* is the official organ of the South Indian Railway Union at Negapatam, Madras. Then there is the weekly *Railway Times*, which serves to focus the problems of all railwaymen throughout India and Burma. The "amalgamated society of the railway servants of India and Burma" publishes its organ from Bombay.

The post workers are likewise represented by several journals. There are two monthlies in English. One is entitled *Labour* (Calcutta) representing the provincial postal and railway mail service association of Bengal and Assam. The other is called *Postman* (Bombay) and is the organ of the Bombay Presidency postmen's Union. The Bombay Presidency postal and railway mail service association publishes its *General Letters* every month at Bombay. The monthly *General Letters* is likewise published by the Poona postal and railway mail service association at Poona. The *Punjab Postal Comrade* is published every month at Lahore by the Punjab and the Northwestern postal and railway mail service association.

It has to be mentioned, further, that there is a monthly *General Letters* published by the All India (including Burma) postal and railway mail service association. The Headquarters of this association are located at Calcutta.

Labour journals in English of a general character are two in number. One is the weekly *Socialist* published at Bombay. The other, also a weekly, comes out at Madras and is known as *Swadharma*.

It remains to add that the labour bureau of the government of Bombay publishes a monthly bulletin. It is known as the *Labour Gazette*.

NEW POLICIES IN ECONOMIC DEVELOPMENT

The cotton factories of Bombay and Ahmedabad, exclusively Indian as they are, have all along been working with yarn imported from abroad. The effort to replace this foreign stuff with home-spun has taken shape in the popularization of the *charkha* (handloom) movement. The All-India Khadi Board and the patriot-propagandists under its auspices are trying to introduce or rather re-

introduce the *charkha* among the agricultural classes. It is expected that the cultivators will utilise their spare hours in the spinning of yarn such as may be used by the factories.

Bengal, the home of jute, commands, theoretically speaking, the monopoly of the world-market so far as this raw produce is concerned. But the sale of jute has up till now been a virtual monopoly of foreign middlemen, who practically dictate the price to the producers. There is a movement going on in the direction of establishing a "jute-growers combine" on the model of American cotton and other raw produce trusts in order that the cultivators may bring their influence to bear on the purchasers who deliver the stuff to the foreign factories in the determination of price.

The Indian railways are "private" enterprises and are almost 100 per cent foreign concerns. They enjoy, moreover, the assurance of a minimum rate of profit at the hands of the government. The result is that from top to bottom the entire administration is run in the interests of certain iron and steel companies of Great Britain. All losses are made up from the public revenues. To remedy this state of things the Indian publicists have started an agitation in favour of the state undertaking the railways and liquidating the private companies.

THE MEANING OF PROTECTION

While these are instances of projects and reform schemes an actual policy of vital importance has already been carried through by the Indian legislature. A protective tariff of 10 per cent *advalorem* has been imposed on all foreign iron and steel (1923). The advantages of this measure are being enjoyed not only by the Tatas, the Indian concern, but also by the English companies, namely, the Bengal Iron Co., the Indian Iron and Steel

Co., and the United Steel Corporation of Asia. A further step has been taken in the same direction. Early in 1925 the Tatas have been granted by the state a bounty of 50 lakhs of Rupees.

Iron and steel products such as come from Great Britain, Germany and the United States have been consequently feeling the competition of Indian goods on the Indian market. It must be noted that the Indian consumer is already painfully aware of the meaning of protection, namely, higher prices for the protected wares. But the protection has been operating as a great spur to foreign capital, and such industries as depend on iron and steel have fast been seeking a home in India.

The new fiscal policy indicates, in the first place, in the most concrete manner the attempt of Great Britain to industrialise India as an equipment for the next war¹. In the second place, it is intended to serve as a direct invitation to British capitalists to come to India and exploit the Indian resources in men and raw produce.

Finally, perhaps, one must also to a certain extent believe that the policy of protection, so dear to the hearts of the Indian nationalists for about two generations, constitutes a remarkable concession to their demands from the side of the government. And in so far as this consideration is valid, thanks are partly due to the Montagu-Chelmsford Reform of 1918, which, although falling far and way short of the Indian goal of *swaraj*, must yet, historically speaking, be credited with having for the first time conferred on the people the right to administer homoeopathic doses of control on the governmental machinery. But in view of the other considerations one should commit a

1 The industrialization of India is for Great Britain but a link in the chain of armaments which comprises the naval base at Singapore as a significant item c.f. my *Politics of Boundaries* (Calcutta, 1926).

great mistake if one were to evaluate the protective measure as an unconditional triumph of Indian "democracy," bourgeois and capitalistic as it is.

THE PROBLEM OF OTHER INDUSTRIAL COUNTRIES

Indian industrialism is then already a force in the industrial and commercial system of the world. No matter whether the capital and the direction be Indian or foreign, and however small in number be the middling and giant concerns, most of the economic and social problems of modern production and distribution are fully entrenched there. Besides, from an absolute standpoint the proverbial statement is significant which says that in the world-scale India already occupies the eighth place as an industrial power while being the first in the tropics.

To understand the significance of Indian industrialism more intensively it is necessary to place it in the perspective of world industrialism. How does industrialized India or rather India in its present and the next stages of industrialisation stand in relation to the other industrial countries? Forgetting for the moment that India is in size as large as Europe minus Russia, this question may be answered quite simply in the following manner. The relations of Great Britain, Germany and the United States the three powers that count, and slightly of France, to India, industrially and economically speaking, are none other than those of these pioneers of modern materialism and industrial civilization to the Balkan states, "Eastern Europe" and Turkey.

It is a "long" pull, the development from the stage of agricultural civilization or of primitive and mediaeval, 'cottage industry' to the full fledged industrial platform or even to the stage of small industries. Economic history indeed is there to demonstrate that all this evolution has been accomplished in Germany and France during the

last two generations and in Great Britain and the United States in only one century. But while these pioneers were getting industrialized there was not much competition from outside in the shape of more powerfully established industries. And what small or great competition there was, the state was nationalistic, free and powerful enough to withstand and crush it by using economic as well as political means.

But in the case of India a nationalistic, free and powerful economic legislation or diplomatic and war policy is out of the question. Consequently a fully industrialised and economically vigorous India cannot make its appearance on earth as quickly as the history of the last three generations should induce one to suspect.

The actual difficulties in the way of such as industrialisation are enormous. The number of technical schools in which engineers, chemists and bankers can be educated in order to man the new industries and credit institutions, supposing they were somehow to be started, is absolutely inadequate, to use a decent expression. These institutions and their scholars cannot be multiplied overnight.

The capital to operate these industrial and credit enterprises, again, has in great proportions to be sought abroad exactly as it is the case in other young industry promoting lands such as Rumania, Russia and to a certain extent in Italy. Foreign finance, which implies automatically foreign direction also, is not an unmixed blessing even from the purely economic apart from the political and social standpoints.

It is naturally impossible as yet to visualize the date by which India will arrive at the 1914 stage of world-industrialism. And by the time India attains to that level the pioneer nations will have taken another jump. For India to catch up to them is for some time not a question of practical politics.

Then there are certain goods which would hardly be manufactured in young countries. First class machineries, complicated tools and implements, as well as chemicals of finer and superior qualities must have to be imported from the elderly industrial countries for quite a long time. Whenever and wherever there arise the questions of "quality", precision, standardization and so forth India will have to depend on foreign products. Scientific, technical or inventive genius cannot be manufactured to order. Time as well as favourable circumstances are needed to create it.

Last but not least, the "small industries" or even the "medium" industries cannot expect to supply all the wants of the entire population in a country as vast as India. One has, moreover, to be prepared for the situation that with the advances in industry agriculture is bound to get a raise and that the population, most of which is agricultural, will be in a position to command more of the purchasing power. The number of men and women functioning actively and discriminatively on the economic system of India as consumers, i.e., agents in the demand side of values will be steadily on the increase. And this increasing wealth and wants of the Indian villagers will as a matter of course furnish fresh stimuli to purchases from abroad in the shape of finished and semi-finished products as well as factory outfit etc. In other words, we arrive at a paradox, namely, that the more industrialised and necessarily more wealthy India becomes the more will she import from other industrial nations.

Besides, one has only to study the trade statistics between Great Britain and Germany or Germany and the United States in normal times to be convinced that although these countries find themselves in almost the same industrial stage each finds in the others quite an extensive mar-

ket for its own products. The larger question of the international division of labour has practically been solved, tariffs notwithstanding.

The industrialization of India would thus appear in the long run to be but India's co-operation with the rest of the world. It cannot be denied that the adult nations are thereby compelled also to encounter a challenge from this youngster in so far as they have no other choice but revise their economic organization and get ready to specialize in the production of technically higher and superior goods. Here as in other instances history is but tending to repeat the normal process in the relations between the old and the new.

CHAPTER XL

JOURNALISM IN COMMERCE AND MANUFACTURE

TECHNICAL JOURNALS IN THE WEST

THE ordinary dailies and weeklies of New York, Paris and Berlin are not made up exclusively of articles and news that serve politics or parties. Apart from the fact that finance, currency, labour and other economic problems invariably influence the orientation of political and social paragraphs, the amount of purely technical, engineering, chemical and agricultural, information that is published throughout the year in the columns of these newspapers is considerable. The number of specialized journals in these fields, which certainly are not meant for the man in the street is moreover not to be overlooked.

There is a Society in Germany called *verein deutscher Ingenieure* (Association of German Engineers) administered from its head office at Berlin. Every week the *Verein* issues a *Zeitschrift* (journal) as well as the *Nachrichtien* (News) which go free to all its 35,000 members. The journalistic enterprise of this *Verein* comprises seven more technical journals.

The *Zeitschrift fuer Metallkunde* (monthly) deals with all metals excluding iron and discusses the processes involved in every stage from mining to manufacture.

The *Technik in der Landwirtschaft* (monthly) is devoted to agricultural engineering.

The *Archiv fuer Waermewirtschaft* (monthly) handles all problems of temperature and heating such as are inevitable in every industry.

A journal given over to the review of all the technical and industrial journals of Germany and foreign countries is the *Technische Zeitschriftenschau* (fortnightly)

The problems of applied mathematics and mechanics constitute the contents of the *Zeitschrift fuer angewandte Mathematik and Mechanik*.

The directors of factories, mechanical engineers, constructors of machines, technicians as well as engineering businessmen find their practical as well as trade interests scientifically treated in the *Maschinenbau* (fortnightly).

The economic, financial and commercial aspects of factories, machines and engineering appliances form the subject matter of the topics with which the *Technik und Wirtschaft* (monthly) deals.

The *Verein* is also responsible for the monthly *Engineering Progress* which is devoted to all branches of engineering, including furnace, iron and electrical engineering. The review is edited separately in four languages German, Spanish, Russian and English.

These are not the only technical journals of Germany. Nor is the *Verein* the only Association of manufacturing and commercial men.

INDIAN COMMERCIAL AND INDUSTRIAL THOUGHT

But commercial and industrial experience as well as economic interpretation of life's values are conspicuous by

their virtual absence in contemporary Indian literature. The commercial sections of the great Indian dailies whether in English or in Indian languages are but misnomers. Neither Bombay nor Calcutta nor Madras nor Lahore can honestly stand this challenge.

The weeklies in English are mostly propaganda journals expressly designed to serve certain political aims. Those in the Indian languages are chiefly fed on the contents of the English section of Indian journalism and betray therefore as much poverty in technical knowledge and thought as are the originals from which they are paraphrased.

Nor have the monthlies done anything substantial and constructive in this direction. The result is that when an index were prepared for all the writers who, in recent years, have contributed articles to the dailies, weeklies or monthlies of India in English, Bengali or Hindi and other Indian languages it is doubtful if even half a dozen names could be singled out as those of persons whose thought is distinctively commercial or industrial. Such in general terms is the state of things in the popular periodical publication.

Let us now take an inventory of the *specialized* magazines and reviews. The *Journal of the Indian Economic Society* with headquarters at Poona and Bombay is the only periodical of its kind under purely Indian auspices. It appears as is well known four times a year. The Hindi monthly of Benares, *Swartha*, is perhaps the only serious journal of an economic character in an Upper-Indian language. The *Mysore Economic Journal*, of Bangalore, an excellent monthly, although serving useful purposes in its own way, owes a good deal of its contents, both original and derived, to non-Indian brains.

On the Bengal side there is a weekly the *Calcutta Commercial Gazette*, which evidently nationalistic in its avowed policy, serves perhaps but to propagate foreign interests. For, not adequately oriented to India's needs as it happens to be, this weekly maintains its existence almost exclusively by borrowing paragraphs and chapters from newspapers and periodicals published in the British Empire. Hardly any attempt is there to explain for India the "meaning of the news" circulated. In other words there is no "editing" done. Two monthlies, *Industry* and *Commercial India*, are issued by a firm in Calcutta. They seem to have been tentatively feeling their way as to how it may one day be possible for young India to work up for itself an honourable and independent domain of self-determined commercial, industrial and economic thought.

But as yet that day is far off. Indian technical journalism or literature as such hardly exists. What little passes for industrial or commercial thought is at best but borrowed knowledge which, moreover, is vague, unsystematised and inadequately mastered. We have been swallowing the industrial and commercial news served by foreign agencies without criticism and interpretation, and this is exactly the same slavish way in which we watch and comprehend the political developments of the world through Reuter's spectacles. In industry and commerce as much as in politics the time has come for India to devise measures for heightening the standard of thought and discussion.

INDIAN BUSINESSMEN IN WORLD-COMMERCE.

But India's trade with Japan, the United States, France, Italy, Germany and Central Europe has been expanding at a rapid rate. Since the signing of the peace treaties, notwithstanding the enormous financial and

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economic disturbances throughout the entire world, India's leather, vegetable oils and cakes, crude drugs, tea and other raw products have been steadily seeking foreign markets.

On the other hand, the expansion of home industry has been brought about by the tenacity of the people as manifest in their strivings to make the industrial swadeshi movement an economic success. As a consequence India has been absorbing, in proportions larger than ever, the goods produced in foreign lands. The demand is keen especially in the line of machineries, engineering appliances, hardware, chemicals, printing and bookbinding apparatuses ; papers, soaps, dyes, etc. India is fast growing into a powerful commercial and industrial unit in the system of world exchange.

Indian merchants do not today feel satisfied with "quotations" from some one particular firm or from some one particular country. They are sending out inquiries to different competing houses as well as to different competing nations. They are comparing the terms of the rivals with one another, making appropriate comments and criticisms thereon, and finally choosing the best and most profitable connections.

Even the old Indian houses of established reputation are changing their traditional method of depending exclusively on age long business relations. They are developing an "open eye" in regard to the world market. The age of monopolies or commercial preserves in India seems to be gone. Indian mercantile mind is creating an epoch of business adventurers and path finders who are bent on discovering fresh chances for successful transactions as well as new opportunities for the investment of talent and resources. A remarkable sign of the time is the daily increasing number of commercial and industrial travellers

that India has been every month sending out to the world.

The new spirit is naturally of as great advantage to the traders of foreign countries as to the Indians themselves. On account of the altered outlook of the Indian commercial classes India is today offering chances for business to every people in the world that is capable of furnishing all that she demands on the most favourable terms. Consequently, India is not the exclusive market for the manufactures of any favoured country but bids fair to be a self-conscious, critical and discriminating limb of the world-market. The phenomenon is of great significance to enterprising business houses in all foreign countries.

It is rather curious, therefore, that the developments in actual life should have failed to influence the journalism and literature of the land in an appreciable degree. One should suspect that the number of competent Indians in this field is not large enough to be distributed adequately over commercial and industrial expansion as well as over commercial and industrial thought. Those who have taken to "business" have perhaps hardly the inclination or the leisure to create literature or contribute to journalism in their special lines.

The poverty of Indian technical thought cannot evidently be combated by such writers as are not themselves chemists or engineers. Up till now therefore Indian business literature has been mainly descriptive, geographical, "patriotic" and at best but economic. Among our authors, journalists and research scholars the class of men that can efficiently handle the problems of industrial technique, processes of manufacture or the inventions and improvements in the methods of production is yet to come. Of all our short comings in national

life here is one that has failed to enlist the conscious attention of our publicists and educators.

INDUSTRY THE BASIS OF COMMERCE

There is another aspect of the problem to which our attention does not seem to have been directed. The vital factor in commerce remains yet to be clearly visualised.

Merely to study the prices and watch the conditions of the market is not enough for the modern merchant. The most important element that affects progress of his affairs is the knowledge regarding the production of goods.

Between two shrewd merchants, otherwise of equal business ability, the balance of advantage will tend to be on the side of the one who has knowledge of industry. In industry are to be included both agriculture and manufacture.

Business men the world over have to depend always on two classes of technical experts. These are the chemists and engineers.

Prosperity in commerce is possible only when the people who are in trade are themselves experts in chemistry or engineering. But if the business men themselves happen to have no mastery over the technique of production they can still build up their trade quite successfully provided they are in a position to employ experts in the chemical and engineering sciences as directors and managers of their affairs.

The command over capital, in other words, over-banking facilities, and the knowledge of conditions relating to transportation and insurance are by no means negligible. But in the long run they play a secondary role in trade-success. The most fundamental element in high commerce is technology.

Naturally, therefore, the directing heads in a school of commerce are to be the men who are counted among the captains of industry including manufacture and agriculture. It is only when the professors of economics, statistics, finance or commercial geography get the benefit of co operation with chemists, engineers and other industrial experts that an institution can be run which is likely to impart the most dynamic and fruitful instruction in commerce. Journalism in commerce, if it is to be efficient, must likewise satisfy the same cultural and social pre-conditions.

THE INDUSTRIALIZATION OF INDIA.

Now, it must be admitted that during the last decade and a half industrialization has scored noteworthy triumphs all over India. Modern industries, which measured by the European and American standard of today, should however be described only as "cottage" or "small" industries have made their appearance in Indian cities. The *Swadeshi* movement can relate its successes not only in the textile line, but in paper, porcelain, glass, cement, sugar, tanning and other branches including even film as well.

The developments in India are however yet but rudimentary. Training for industry is not yet available on a desirable scale in the schools. Nor are the factories elaborate enough to provide anything but elementary experience to the apprentices. Such a thing as "industrial research" is besides, utterly unknown among our countrymen.

The importance of industrial research will be realized when one learns how enormously the German syndicates are spending money on technical institutes and societies in order to develop the "brown coal," a worthless heating stuff, as it is, of Central Germany. The Americans who have spent 21 million dollars on researches in dye-stuffs

during 1917-1922 in order to improve the quality of their *Swadeshi* chemicals and force the German goods out of the United States will also teach Indian businessman a lesson on this score.

The question resolves self-fundamentally once more into that of education and investigation in manufacture. Not until India is provided with a large number of technical experts in different lines of economic life can, we expect a reform or enrichment in journalism or a vitalizing of the general pedagogics. And of course the further development of the Indian people in modernised commerce and industry is also dependent on the constant supply of first class chemists and engineers. In order to beg for all this knowledge and experience India will for quite a long time have to send her children abroad. No Indian futurist can afford to think otherwise in regard to his programme for to-morrow.

WHERE AND HOW TO TRAIN ENGINEERS AND CHEMICAL LEADERS FOR INDIA

The industrialisation of India needs three different groups of men for three different classes of objects. First, the men who will be competent to run industries, start new ones or develop the already established concerns whether as foremen or as mechanics. Secondly, India is in need of men who will be competent to discharge the functions of professors in schools of technology. And in the third place, there are wanted men who will be competent to carry on original investigations in industrial methods and problems whether in connection with (1) workshops and factories or with (2) universities and technical schools.

Each of these three classes of men requires a twofold training : practical and scientific. The practical training can be secured chiefly in factories and workshops. But

in schools and laboratories also one can acquire practical experience, which although of a limited character, must not be overlooked. The scientific training can be had only in schools and research institutes such as are connected with factories. Naturally the practical training is essential for the first group of men. The scientific training is more important for the other two.

An attempt should be made, in every instance, to afford chances for higher industrial training to such Indians as have already been employed in one capacity or another in the existing industries in India. The preliminary qualifications for all the three groups may be taken to be the same. The candidates should be expected to have done some work as apprentices or foremen in workshops. And they must have the knowledge of mathematics, physics and chemistry such as B. Sc., students are generally equipped with. Physical strength, implying not only sound health but also stature, is a very important consideration.

In order to be qualified for the first group the students should be advised not to enter universities nor schools of the type of the Massachusetts Institute of Technology (Boston) in the U. S. A., the *Conservatoire des Arts et Metiers* of Paris or German *Technische Hochschule*. They should seek institutions known in Germany generally as *Fachschule* or get admitted into factories.

Not less than 3 years is likely to be the period of time required in France or Germany provided the student has already spent one year in mastering the language. Working in factories is to be the main feature.

For the other groups the students must join the institutions of the type of *Conservatoire, Hochschule* or the "Boston Tech."

In France and Germany the time required may be taken to be 4 years, provided the student has already

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spent one year in mastering the language. Working in factories is to be occasional, but the inspection of factories and laboratories should be sought as often as possible.

On an average India has to spend about Rs.10,000 per head for the training of experts along the lines herein indicated. India's industrial and commercial progress is limited by the number of persons in whom she can afford to invest this amount of capital.

THE FOREIGN RELATIONS OF INDUSTRIAL AND COMMERCIAL INDIA

For all practical purposes there is hardly any difference between the United States, France and Germany so far as the Indian students of commerce and technology are concerned. Occasional political considerations such as influence the peoples of these countries in their attitude to Great Britain may be ignored, because these are fundamental in nature. From the standpoint of technical perfection,—although France should not perhaps be ranked as high in industry as the other countries,—as well as from that of social and cultural relations, India can choose any one of these lands almost blindly for the training of her own experts in industry and industrial research.

In the United States there is no language problem, but with regard to France and Germany this problem must have to be faced both at the Indian end as well as at the European.

Indian dealers who have entered into trade relations with French and German manufacturers or business houses have already been put to much inconvenience owing to their absence of command over the French and German languages. The principal importing houses of leading Indian cities might therefore combine to start institutions wherein persons seeking career in business could get a preliminary training in French and German languages

for a period of, say, six months. No Indian firm of any importance can expect to achieve satisfactory results unless it employs its own specialist in French and German languages as well as experts in the industrial geography of France, Germany and the United States.

The chances for foreign engineers or chemists to get employment in American, French or German workshops in any capacity are very limited. Indians who are willing to learn the technical processes in certain manufactures can avail themselves of the few opportunities only when they have lived for some time on the spot in the United States, France and Germany.

An Indian apprentice seeking admission in a foreign factory must be equipped with the knowledge of the languages and must be prepared to pay monthly or yearly fees to the proprietors of the works. These fees are in many instances likely to be quite high, depending on the kind of work that the apprentice wishes to learn. And naturally the amount of Indian competition which is ultimately to affect the demand for the corresponding foreign goods will influence the fees charged by the factories. Americans, Frenchmen as well as Germans have become cautious since they have had experience of Japanese apprentices.

As a general rule, it must be remembered that facilities for industrial training in factories and workshops can be created, if at all, only through personal influence, friendship, or favour. No amount of correspondence from India is likely to be efficacious in the matter.

But perhaps when an Indian customer comes to certain manufacturers in the United States, France or Germany with definite and handsome orders for goods the business appetite of the industrialists will be whetted automatically. And they will naturally be inclined to

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teach him the processes and manipulations concerning the articles he wishes to purchase.

In foreign relations India must not expect any special considerations or extra favours as a matter of course. Like the Japanese bankers, importers and publicists Indians also must be prepared to wait, watch and pay.

CHAPTER XLIII

THE AGRICULTURAL POLICY OF POST-WAR BRITAIN

BRITISH NERVOUSNESS

It is well known how towards the beginning of the present century the incidents connected with the Boer War created a vast amount of nervousness in the British people in regard to their national "efficiency" as human animals. That nervousness is responsible for the scientific and philosophical investigations bearing on physique, stamina, heredity etc., now associated with the names of Galton and Karl Pearson.

The last war seems to have stirred the British psychology upon more or less similar lines. Only this time the nervousness has been manifesting itself in the economic domain,—and especially with reference to agricultural "preparedness."

GERMAN AGRICULTURE

In 1916 was published a treatise entitled *Recent Development of German Agriculture* by Sir Thomas Middleton. On that basis a debate was held in the House of Commons. The discussion turned out to be pessimistic for Great Britain. To study the situation in all its details a Tribunal of investigation was therefore appointed by the Bonar Law Ministry in December 1923.

A TRIBUNAL OF INVESTIGATION

The mentality underlying the appointment of this Tribunal would be evident from the "terms of reference."

The first function of the Tribunal was "to inquire into the methods which have been adopted in other countries during the last fifty years" in regard to three items : (1) to increase the prosperity of agriculture, (2) to secure the fullest possible use of the land for the production of food, and (3) to provide for the employment of labor at a living wage. The second function of the Tribunal was "to advise as to the methods by which these results can be achieved" in Great Britain.

COMPARATIVE AGRICULTURE

Evidently the British Cabinet took it for granted that something was lacking in Great Britain's agricultural system and that there was much to learn from the developments in other countries.

The Tribunal, consisting, as it did of Sir William Ashley, the economic historian, Professor D. H. Macgregor, the economist and another professor, has completed its investigations. The results, which may be described as a well-documented comparative study of agricultural policy, have been submitted to the Ramsay-Macdonald Ministry (May, 1924). They are now available in book form. The studies comprise France, Germany, Holland, Belgium and Denmark.

"NATIONAL INTERESTS"

"The phrase "national interest" occurs in the publication quite often. Sir William Ashley says that "the maintenance of the arable area is desirable in the national interest." The disadvantages attaching to any further considerable decline in the area are likely to be "so grave that it will be worth while for the country to pay a substantial price for its maintenance."

The issue is considered to be "fundamental". It is assumed that anything the Government might do in regard to agricultural reconstruction would serve to "induce

farmers to pursue a line of action which they would not pursue if left to themselves." In other words, the farmers themselves are not patriotic, adventurous or go-ahead enough and are not inclined to pursue their trades according to the "national interests" (p. 98).

HOW TO PREVENT DECLINE IN ARABLE AREA

How to prevent the decline in the arable area? The measures must needs be "protective,"—whether through import duties, or through subsidies or through guaranteed prices. Ashley admits this. But if protection be not congenial to British politics of the day there is only one alternative under the free trade system.

The amount of tilled area can be maintained only by going over to cattle and dairy farming. But the farmers are not going to take to these new lines until and unless their financial profitableness be demonstrated by state experiments on a large scale.

Whether the Government's policy be that of protection or of free trade, vast outlays are necessary in order to prevent agriculture from dwindling in those respects which promote food production and employment on the land. (pp. 97-99.)

ECONOMICS VS. WAR

Professor Macgregor is not as pessimistic about British agriculture (pp. 100-103, 149-151, 192, 193) as Ashley. His report, independent as it is of that of Ashley's, is equipped with comparative statistics such as should prove to be convincing to students of "economics." From the standpoint of agricultural efficiency he is not at all nervous. So his investigations are intended to communicate to his countrymen "simply a desire to consider by what measures we may develop the asset of our land."

But although economically and technically Macgregor wants the British people to be cool while they

compare their agricultural situation with that of other peoples, there is one consideration to which he is prepared to attach due importance. "The main and dominating reason" is, as he remarks, "defence in time of war."

The decline in arable land is a fact and can be prevented, says he, only by some form of subsidy. "The nation, if it desires the result, must differentially assist this type of cultivation." The subsidy suggested would cost £7,000,000 per year. In other words, agricultural preparedness would need on the part of the state as much annual outlay as is needed to construct a battleship (pp. 102, 194.)

ADAM SMITH MEETING FREDERICK LIST

Should the British Government embark on such tremendous expenses in order to promote what may be called agricultural self-sufficiency, although inevitably partial as it is bound to be? Ashley argues as follows: "Any conceivable plan will meet with difficulties, which the state will only encounter if it believes there are national advantages to be secured there by."

The sacrifice on the part of the taxpayer from year's end to year's end is certainly very heavy. But "the burden would have to be shouldered if it is desired to secure certain national objects."

Ashley is not prepared to spend time on the discussion as to whether in the long run the result of all these outlays, "even measured in total national 'wealth' in the ordinary commercial sense, would be advantageous or not." In his estimation it is "sufficient to recognise that there would certainly be a burden to be carried for a time." (pp. 98-99).

One would think that Ashley was here almost reproducing *verbatim* the logic of Frederick List's *National System*.

of *Political Economy*. In that great Prussian protectionist's view, as is world-famous, the wealth-making power is more important than wealth itself.

But Ashley does not have to look far away from the British Isles in order to cite an authority. For, no less a man than Adam Smith himself, although the champion of *laissez faire*, individualism and free trade, had taught in his *Wealth of Nations* (Book IV, Ch.2). "Defence is of much more importance than opulence." It is then war-strategy that is ultimately to dictate the agricultural policy of post-war Britain, (pp.205-220).

SECURITY OF TENURE

Among the recommendations with an eye to the long run are mentioned numerous administrative and educational measures. One of the most important of the economic reforms suggested is that bearing on the question of tenure. Peasant proprietorship such as holds on the continent from the Loire to the Vistula is admitted to be the best system. But since it would be too revolutionary for Great Britain with her present legal and social institutions Ashley believes that the next best is (1) to keep the "tenants" as secure as possible in their tenure, and (2) to guarantee that security in no unequivocal manner (pp. 37-38, 90-91).

The Law of Property Act, 1922, is said to be already providing for this security on a considerable scale and need only be enforced as systematically as possible. The tenants are thereby ensured substantial comprehension for "disturbance" as well as for "unexhausted improvements" from the landlords, and can almost feel that they are all but owners.

SMALL HOLDINGS

The breaking up of large estates into small plots is considered to be a chief cause of agricultural prosperity in

Denmark, Germany and Belgium. This system of "family farms", such as can be operated by "a man and his family in the main without hired labour," is rare in England and is recommended to the legislators. The "small holding" should however be larger than 50 acres (=175 bighas) and be about 70 or 80 acres in area. For otherwise the decent standard of life could not be maintained (pp. 87-88, 91).

The Government in co-operation with the Local Authorities is to buy the lands of the larger proprietors and settle suitable applicants on the estates. The settlers on small holdings are to be granted certain immunities and leniencies in the matter of rent. The Small Holdings and Allotments Act of 1908 is to be revised in the light of the projected reform. The scheme cannot be self-supporting for some time, and the state will have to bear the financial burden.

STATE DICTATING LIMITS TO PROPERTY

Small holdings can be created or their number enlarged only at the expense of the larger estates. Socially and politically speaking, the process involves a redistribution of lands through compulsory purchase or hiring. Plainly, then, the state is to dictate to the people the limits of amount of their properties. Perhaps the terms "expropriation" or "confiscation" will not be quite appropriate as a description of the measure, which in contemporary parlance will be called "communistic". But all the same, the mentality behind these actions indicates a tremendous change in British social conscience and jurisprudence.

A NEW LEGAL SENSE

Considerations of national defence¹ have been urged to be a vital factor in the new measure necessitating, as

¹ French arguments against industrialisation and for adequate agrarisation have found expression in *Le Probleme de la terre diens l'economie nationale* (Lyon 1926) by Terrel.

it does, vast annual appropriations. But one should not ignore also the "economic" motives which have been guiding the theorists and legislators.

The small holdings are being advocated "on the grounds that they keep a number of people on the land in conditions which render them reasonably happy and that they offer prospects to the agricultural labourer" (p.91) The logic here is that of the traditional adaptibility, spirit of compromise and expediency which have always enabled Britain to institute reforms where other peoples go in for revolutions.

For, to keep the agricultural labourer reasonably happy is to safeguard the land from the throes of Bolshevism exactly in the manner in which Bismarck by his insurance legislation attempted to wean German labour away from the social-democratic movements of his days. And from another standpoint it is but meeting the inevitable "new order" half-way, as is evident also in the general theories represented by Professor Pigou in his *Economics of Welfare* (London, 1924).

In any case Britain has launched a remarkable measure in agricultural reconstruction. For sober-minded people it should prove to be a magnificent object lesson in the developments of legal sense. The world has been growing, and along with it the ideas of law, property and contract. Historical jurisprudence should take note of these fresh data.

CHAPTER XLIV

AGRICULTURAL EDUCATION IN GERMANY

THIRTEEN AGRICULTURAL UNIVERSITIES

IN Germany today there are 13 educational institutions of the highest grade devoted exclusively to agriculture.

370 ECONOMIC DEVELOPMENT

Seven of these belong to Prussia. All are maintained by the government.

Of these thirteen, 8 are described as "Institutes" of Universities. They constitute the agricultural faculties or divisions of universities, to use Anglo-American and Indian terminology.

The students of agriculture become "doctors of philosophy" like their comrades in other divisions or faculties. The agricultural institute is to be found in connection with the Universities at Koenigsberg, Breslau, Halle, Goettingen, Kiel, Leipzig, Jena and Giessen.

Of the other five, one constitutes the agricultural branch of a *Technische Hochschule*, namely, at Munich. The remaining four are quite independent institutions and are called *Landwirtschaftliche Hochschule* (Agricultural College). They are located at Berlin, Bonn, Hohenheim (Wuerttemberg) and Weihenstephan (Bavaria).

It should be noted that the word *Hochschule* does not mean a "high school", nor even an ordinary "college" as usually understood but denotes the highest educational institution conceivable from the academic standpoint. The *Landwirtschaftliche Hochschule* and the agricultural division of the Technical College should be regarded as full agricultural universities. To a certain extent they are perhaps more efficient and important than the Institutes of the Universities.

SEMINAR FOR AGRICULTURISTS

To finish the courses offered by the agricultural universities one needs at least 3 years. Not many people are in a position to spend the required amount of time and money. So the Prussian ministry of agriculture has been estblishing since 1911 a number of *Hoehere Lehranstalten* (higher educational institutions) for practical agriculturists. These are called briefly *Seminare fuer Landwirte* (seminars for agriculturists).

For admission the students must show a record of practical agricultural work extending over 4 years. As for general intellectual qualifications they must be generally speaking, *Gymnasium*—or *Realschule*—passed men.

The curriculum is finished in one year of 42 weeks each with about 30 hours' school-work. The subjects of instruction are as follows: (a) *fundamental sciences* (290 hours during the whole year): (1) chemistry for agriculturists, (2) physics for agriculturists (seasons and weather, electrical and other machines), (3) botany for agriculturists, (4) domestic animals; (b) *agricultural sciences* (810 hours): (1) general and special plant-culture, (2) general and special animal breeding (including fodder and milk-trade and industry), (3) economics of agricultural organisation (administration of farms, price-calculation, book-keeping), (4) economics and commerce for agriculturists (5) law and constitution; (c) *auxiliary sciences* (160 hours): (1) animal diseases, animal-birth, (2) farm construction, (3) surveying, (4) forestry, (5) pisciculture, (6) fruits and vegetables. Physical exercises, sports, etc., are offered in summer.

The examinations, one oral and one written, are taken by a committee appointed by the ministry. Success entitles the candidate to a certificate which says that he possesses enough theoretical knowledge to take independent charge of a large agricultural undertaking. The government recruits its officials for the agricultural department generally from these seminar-graduates.

There are 9 such seminars in Prussia alone. Only two belong to the rest of Germany.

SCHOOLS FOR SONS OF PEASANTS

The schools such as are visited by the sons of peasants or farmers who cultivate the lands with their own hands are of a lower grade than the seminars. They are

the real agricultural schools in the strictest sense of the term and are called *Landwirtschaftliche Fachschule*.

Their number is 450 in all Germany (1922), of which 300 belong to Prussia and 60 to Bavaria. The Prussian institutions are maintained by *Landwirtschaftskammer* (agriculturists chambers) with government grant-in-aid and under government control. The other schools are entirely state institutions.

In 1920—21 there were about 21,000 students at school in the 300 institutions of Prussia. The governments (central, provincial and rural) spent about 15 lakhs of rupees on 251 institutions in 1913—14, the pre-war year. The total expenses came up to 19 lakhs. The remaining four lakhs were covered by students' fees which accounted for 24 per cent, and chamber contributions, which reached only 5 per cent of the total expenditure.

These 450 institutions fall into two groups : (1) whole time schools and (2) part-time schools. These latter are held in winter months and constitute by far the larger group, being 420 in number.

(a) TWO-YEAR SCHOOLS

The whole-time school, known as *Ackerbauschule* (agricultural school) carries a two-year course, and while attaching due importance to practical work emphasises the theoretical aspect of agricultural studies. The learners are all sons of peasants and farmers and such as have finished the *Volksschule* at 14. 30—32 hours per week in summer as well as winter are devoted to the curriculum. The students are bound to live in the boarding premises (*Internat*) maintained by the school.

The subjects of instruction are quite varied. The following list describes the courses offered by the school at Zwaetzen near Jena :

(a) *General:*

(1) German, including business essay, (2) German history and history of agriculture, (3) geography, (4) arithmetic, (5) geometry, (6) surveying, (7) designing.

(b) *scientific* :

(1) physics, (2) organic and inorganic chemistry, (3) subsidiary industries of agriculture, (4) chemical industries, (5) mineralogy and geology. (6) botany and diseases of plants, (7) botanical excursions (in summer twice a week) (8) zoology.

(c) *agricultural* :

(1) agriculture and manures, (2) machines and implements, (3) trees and meadows, (4) vegetables and fruits, (5) anatomy and physiology of agricultural and domestic animals, (6) general animal-breeding, including fodder, (7) special animal-breeding including milk-industry, (8) bee-culture, (9) veterinary science, (10) agricultural business, (11) agricultural book-keeping, (12) agricultural accounting, (13) law and constitution.

(b) 429 WINTER SCHOOLS

These two-year schools are considered to be too expensive by peasants. It is the winter-schools that are mostly patronized by them. In 1920-21, for instance, while the number of students in the former type was only 1757 there were 19,515 in the short-time schools held in winter.

The students help their families in cultivation during the summer months and attend the schools for 5 months (20 weeks) in winter. Two winters are spent in the school. The teachers come with the students to their farms in summer and discuss with their parents the relations between the latest inventions or theoretical ideas and actual farming. The teachers' "social functions" serve the chief connecting link between theory and

practice as well as between the village and the larger world.

Each winter course comprises altogether 720 hours at the rate of 36 hours per week. The subjects of instruction may be grouped as follows : (a) *general* : (1) German, (2) arithmetic, (3) conception of space, (4) drawing surveying, designing, (5) history and civics, (6) geology, (7) physical exercises and sports, (8) singing.

(b) *scientific* . (1) physics, (2) chemistry.

(c) *agricultural* : (1) agricultural botany, (2) agricultural animal-lore, (3) plant-culture, (4) animal breeding, (5) animal health, (6) farm management, (7) book-keeping, (8) vegetables and fruits.

Of course every student is at least a *Volksschule*-passed young man, whose academic standing is almost identical with that of the Indian matriculate. The poorest peasants of Germany who cannot afford to go in for higher education in any other lines try to send their sons at least to these agricultural winter-schools.

TWO TYPES OF SEMI-AGRICULTURAL SCHOOLS

Two types of agricultural schools are here left out of consideration. The ones are *Fortbildungsschulen* (continuation or vocational schools) in which young men and women of the workingmen or peasant class are compelled to spend four years after leaving the *Volksschule* (elementary free compulsory school) at the 14th year. During this period of course they are maintained in tuition by their employers.

The others are the so-called *Landwirtschaftsschulen* (agricultural schools). These are really middle or secondary schools (*Mittelschulen*) which students join at their own costs after finishing the 8-year *Volksschule* or while passing through its higher stages. Only, in addition to the general subjects of instruction the scholars are

required to take a modern language and several agricultural courses. The students are in a position to finish this school at the 18th year. There are 21 such schools in all Germany. These *Landwirtschaftsschulen* are analogous to the *Handelsrealschulen* (secondary schools with commercial courses).

HIGHER SPECIALIZED SCHOOLS

Up till now, however, only the educational institutions for general agriculture have been dealt with. It is desirable to notice that in Germany a number of *Fachschulen* have grown up which, although not strictly agricultural may be described as allied institutions. These are given over to the special *Fächer* or subjects in which the rural population is as a rule interested. The schools, again, are of two grades (1) higher and (2) lower, depending on the conditions of admission.

(a) GARDENING SCHOOLS

There are 6 higher schools of gardening, three of which are state institutions, one being in Saxony (Pillnitz near Dresden), and the other two in Prussia. The *Hoehere Gartenlehranstalt* (Higher Gardening-school) at Dahlen near Berlin, is a private institution but is controlled and financially helped by the Prussian government.

The students are not admitted unless they have practical experience for 4 years as gardener. As for academic qualifications they must be near the secondary school-final, corresponding roughly to the Indian "Intermediates" in sciences or arts. The schools carry a two-year course.

The first year is devoted to general gardening subjects. These include (1) fruit trees, (2) designing, (3) garden-technology, (4) plant-culture, (5) drainage and watering, (6) physics and meteorology, (7) soils and manures, (8) mathematics, (9) chemistry, (10) zoology,

(11) botany and diseases of plants (12) surveying, (13) drawing and projection, (14) architecture, (15) painting, (16) current economic problems.

During the second year the student may choose one of the three following subjects : (1) landscape-gardening, (2) fruit-trees, (3) plant-culture.

A *Hochschule* or "college" of gardening is in contemplation. The scholars of the existing "higher schools" are in high demand in every city and town as gardeners or inspectors of parks and gardens.

(b) SCHOOLS OF LAND IMPROVEMENT

Land-improvements including drainage, reclamation etc., undertaken by the rural, provincial or central authorities require the services of specialists in meadows and fields. To build up such *Melioration-Techniker* (improvement-technologists) or *Wiesenbaumeister* (meadow-architects) an appropriate type of schools has been established in Prussia and Bavaria. They are called *Kulturbauschulen* (improvement architecture schools) or *Wiesenbauschulen* (meadow-schools).

There are 5 schools each with a 4 year course. The students must be at least *Volksschule*--passed men.

The subjects of instruction are as follows : (1) *general* : arithmetic, handwriting, stereometry, law and constitution ; (2) *mathematical* : arithmetic, algebra, "planimetry," stereometry, trigonometry, descriptive geometry ; (3) *scientific* : geology, mineralogy, soils, physics, chemistry, botany, zoology, statics, mechanics and hydraulics ; (4) *technical* : plant-culture, manures, pisciculture, surveying, designing, geometrical and freehand drawing, architecture, roads, watering, water-installations, improvement technology, reclamation of wastes and marshes, projection.

The tendency is to heighten the admission requirements, so that nobody be admitted without the certificate of higher stage studies in a secondary school, as for the "higher gardening school."

LOWER SPECIALIZED SCHOOLS

The schools for special subjects belonging to the lower grade admit students with the *Volksschule* certificate. Such schools fall into six different groups.

1. SCHOOLS FOR GARDENING, FRUIT AND WINE-CULTURE

In Prussia there are 20 lower schools of gardening etc. The courses run over from 1 to 3 years. Some of these are winter-schools. A number of these are exclusively intended for *Gaertnerinnen* or women-gardeners. Wine (grapes) culture is a speciality in some of the Rhineland schools.

There are some 12 more schools in Bavaria and other parts of Germany. Besides, there are the *Gaertnerischen Fortbildungsschulen* (continuation schools for gardening). In 1920 there were 80 such schools attended by 3000 scholars.

2. SCHOOLS FOR ANIMAL-BREEDING

(a) *Horse-breeding*: There are some 8 riding and driving-schools (*Reit-und Fahrschulen*) in Prussia. The students learn everything connected with horse-life, riding, coachman's trade etc.

(b) *Cattle-breeding*: One of the most important is the *Viehwaerter-und Melkerschule* (Milking School) at Kellen near Cleve (Rhineland.)

(c) *Swine-Culture*: There are 3 schools in different parts of Prussia in order to teach young men the rearing of pigs.

(d) *Bird-culture (Gefluegelzucht)*: 6 schools : Croellwitz near Halle, Neuss (Rhineland), Schoenbrunn (Bavaria) etc.

(c) *Bee-culture*. The schools are called *Imkerschulen*: at Finkenwalde near Stettin, Sudersburg(Hannover), Mayen (Rhineland), etc.

(f) *Pisciculture*: There is one *Fischereischule* at Friedrichshagen near Berlin and another at Starnberger See (Bavaria). Besides the provincial departments of river-fish organize periodical lecture courses for the fisher men of the localities.

For sea-fish there is a number of schools in the sea-coast towns.

3. DAIRY-SCHOOLS

There are 12 *Molkereischulen*(dairy-schools) of which 9 belong to Prussia (Koenigsberg, Kiel, Breslau etc.)

Courses are offered in two directions : (1) in order to build up "milk officers" and (2) in order to train practical "milk-men." Short-period courses, extending as they do, over several days or weeks are enough for the latter class.

For milk-officers the course covers half a year. As a rule none but young men who possess practical experience as milkmen for 5 to 7 years are admitted. And naturally they must be at least *Volksschule* passed people. The studies comprise 30 hours per week and include the following subjects : (1) chemistry, physics, and bacteriology, (2) general milk trade and industry, (3) the business of milk trade and industry, (4) examination of milk and dairy products, (5) book-keeping, as required in dairy business, (6) commerce (money, "co-operation," civics, legislation, trade etc.) (7) heating and electrical apparatuses and other tools and implements (8) animal-breeding.

Those who pass the final examinations are known as "certified milk-officers" and can take charge of large business establishments in the dairy line.

For women there are two or three special dairy schools. The courses extend over a whole year.

4. SCHOOLS FOR OTHER AGRICULTURAL INDUSTRIES

Certain other industries, although not purely agricultural, are connected with farm life and may be described as allied to agriculture. For these industries also there are corresponding schools.

(a) *Alcohol*: The manufacture of alcohol is taught in several *Vorschulen* (preparatory schools) of which there are 5 in Prussia. There are higher schools, too, known as *Brennereischulen*. There is one in Berlin. Two others are located at Weihenstephan (Bavaria) and Hohenheim (Wuerttemberg). The course lasts 3-4 months.

(b) *Fermentation*: (*Gaerung*): The industries connected with fermentation are taught at the *Institut fuer Gaerungsgawerbe* in Berlin. The manufacture of starch, the dessication (drying) of potatoes, the making of yeast, and the preparation of vinegar are some of the lines included in the curriculum.

(c) *Brewery* (*Brauerei*): In Berlin there is a *Versuchs- und Lehranstalt fuer Brauerei*. At Weihenstephan (Bavaria) there is the *Hechschule* (college or university) *fuer Landwirtschaft und Brauerei*. The technical division of the agricultural college (*Landwirtschaftliche Hochschule*) at Hohenheim also offers courses in the manufacture of beer.

In order to become engineers in the manufacture of alcohol, beer etc., the students have to attend the courses for 3 years.

(d) *Sugar*: The *Verein der deutschen Zuckerindustrie* (Association of German Sugar Manufacturers), in Berlin maintains a *Lehrinstitut*. Here one can become sugar-engineer in 3 years, and sugar-chemist in 3 months. The *Schule fuer Zuckerindustrie* at Braunschweig offers similar courses.

(e) *Milling and Baking*. There is a *Versuchsanstalt fuer Getreideverarbeitung* (manipulation of grains) in Berlin. Courses are offered for (i) workingmen in milling and baking shops, (ii) teachers of vocational schools and (iii) officers of customs houses.

5. SCHOOLS FOR HORSE-SHOEING

In Germany a smith is not permitted to shoe a horse unless he has the certificate from the government or government-recognized guilds or other institutions. In order to get the-certificate one has to pass an examination (oral and practical) held by a committee of three persons ("smith-master", veterinary doctor and agriculturist) presided over by a government veterinary doctor.

There are 60 schools in Prussia, maintained by agricultural and other rural associations, where horse-shoeing is taught. Besides, the state maintains a number of military horse-shoeing schools, e.g., at Berlin, Hannover etc.

The courses cover 3 months. The students must be at least 19 years old. The training of such smiths as wish to function as teachers in horse-shoeing schools is given at Berlin, Hannover and Cologne.

16. SCHOOLS FOR AGRICULTURAL OFFICE

There is a *Buerobeamtenschule* (school for office-bearers) in Koenigsberg. The students have to spend 1 year and study book-keeping, land laws, administration,

taxation, management of estates etc. Nobody is admitted without a previous training in agriculture. The corresponding school at Halle (Saxony) is known as *Rechnungsfuehrerschule* (school for accountants).

The number of schools in these lines has been on the increase.

"Co-operative societies" require book-keeping, secretaries, managers, clerks, accountants and so forth. In order to provide for such officials (men and women) there has been established at Berlin the *Deutsche landwirtschaftliche Genossenschaftsschule* (German school of agricultural co-operation). The course covers 3-6 months.

7. FORESTRY-SCHOOLS

For the upkeep of the forests and hunting grounds the government of Prussia needs a number of trained officials, and accordingly maintains 3 *Forstlehrlingschulen* (schools for forest apprentices). Not more than 50 scholars can study together at one time in each of these institutions (Steinbusch, Hachenburg, and Spangenberg).

In Bavaria there is a similar school at Kelheim under the name of *Waldbauschule*.

The students learn practical forestry and hunting as well as the laws of the state bearing thereon. Theoretical knowledge of agriculture and gardening is also promoted in these schools. There are, besides, courses in orchards, pisciculture, and apiculture. Among the "general culture"¹ courses German, arithmetic, composition and drawing are

1 The material is derived from the *Handbuch fuer das Berufs und Fachschulwesen* ed. by Kuehne (Leipzig, 1923). German agricultural developments may be followed in W. Wygodzinski's *Agrarwesen und Agrarpolitik* (Leipzig, 1920), Berkners *Neue Wege der deutschen Landwirtschaft* (Berlin, 1920), and Schullern's *Agrarpolitik* (Jena, 1924.)

listed. Finally, physical exercises, sports, gymnastics, swimming and shooting, as well as horn-blowing and singing are attended to.

CHAPTER XLV

INDUSTRIAL RESEARCH AS A NEW AGENT IN PRODUCTION

ECONOMIC LEGISLATION

ECONOMIC legislation happens perhaps to be the most tangible of all the important factors bearing on recent economic developments. It began to be prominent during the war, and since then under impact of communism and semi-communistic expansion of state-functions in all civilized lands it has grown into the greatest single agency in social dynamics.

New land laws have been enacted. The laws of labour and factory conditions have acquired a prominence undreamt of before. There is legislation to-day bearing on insurance, to-morrow on banking institutions, and the next day on currency.

There is hardly any country to-day where economic phenomena are governing themselves through "pure economics". *Etatisme* has conquered every phase of material life,—unemployment, prices, rates of interest, housing and what not, even where the theory or philosophy of the high brow sages is armed *cap-a-pie* against state-interference.

The power of legislation is equally manifest and rather in an unprecedented degree in international trade-relations. The tariff question, the problem of commercial alliance, reciprocity, the most-favoured nation treatment, *modus vivendi*, trade-treaties and so forth appear to be no less weighty phenomena in the contemporary economic development of nations. Legislators in every

country have much to worry about *la diplomatie commerciale*, involved as it is in the establishment of commercial "agreements" with foreign countries.¹

AGENTS IN THE CREATION OF VALUES

While watching the daily expanding scope of the legislature and publicists in the matter of shaping the economic destiny of the peoples one need not, however, be too monistic in the calculation of forces that determine the creation of utilities. For, after all, not everything in the line of national wealth depends on legislation alone, and "applied economics" is not all politics.

In every economic enterprise the first and foremost aspect is undoubtedly technical. Herein lie the production, manufacture, transformation of one kind of goods into another, including the utilization of "waste" products

Then there is the commercial function. It comprises sale, purchase, exchange etc., of the wares on the most convenient terms.

The financial question must be considered to be an independent problem in itself. How to attract and command capital to an enterprise constitutes a tremendous factor in economic development. Here one touches the sphere of credit and banking.

In modern times the security of goods and persons has moreover become an essential necessity. Not only have the commodities to be insured against waste, loss, destruction etc., but the working men also, must be assured the wages and means of combating insanitary conditions, accident, old age and death.

¹ The French problems can be best seen in Gignoux's *L'Après-guerre et la politique commerciale* (Paris, 1924) and the German in Flant's *Deutsche Handels politik* (Leipzig, 1924.)

Finally, as every business man knows, accounts play a mighty role in the history of every factory, trading-house or other undertaking. One has to be on the look out for the periodically regular statistics of prices, wages, costs and output as well as the exact schedule of goods, markets, bank-rates, balances and so forth.

Last but not least, there is the administrative function. No enterprise without its controlling, directing and organizing "general staff". The functions of the economic general staff in each enterprise consist not only in giving the right "officer" the right place but also in mobilizing the right classes of "men",—the hands and feet,—for the discharge of their proper functions. The question of getting the "apprentices" and artisans adequately trained whether in or out of the factories belongs as a matter of course to this responsibility of administration.

CHEMISTS VS. ENGINEERS

There is a strong opinion in French technical circles to the effect that one of the reasons for France's inferiority to Germany in chemical industry consists in the inferior position to which chemists are relegated by French industry in the workshops and factories. The industrial organization of France is said to be defective, for the chemists, however able they may be, have been serving but as "second fiddles" to the engineers who lord it over the whole show.

In France, as in every other country, "modern" industry began as engineering business. Machines, tools, implements, apparatuses, installations etc., constituted the chief visible embodiments of new economic life. The guidance, administration and control of all productive enterprises came automatically to be monopolised by mechanical (and electrical) engineers.

Even in workshops and factories where the goods to be produced were nothing but chemicals, the chemists were employed solely as experts to tend the laboratories. They were hardly deemed worthy of functioning as heads of factories. There has always remained the acute problem of chemists vs. engineers.

The fight between chemists and engineers is an interesting problem in every country,—especially in those lands where industrialization has not yet scored its final triumphs.

CHEMICAL ENGINEERING IN INDUSTRIAL ORGANIZATION

A solution of the problem has already been sought in the United States and Germany. These countries have not attempted to ignore the antagonism between the two classes of technical experts nor to raise the chemists above the engineers or place both on the same level in factory management. The antithesis has been removed by what may be described as a synthesis which consists in converting the chemist into an engineer and the engineer into a chemist. A new class of technical experts has thus come into being. They are known as "chemical engineers."

American universities offer courses in chemical engineering. Students of chemistry are compelled to study drawing, designing mechanics, boilers and steam-engines while the students of engineering have to handle the mysteries of test-tubes and chemical reactions. In Germany, likewise, owing among other circumstances to the freedom allowed in the choice of the subjects at the University or the *Technische Hochschule*, the students are in a position to equip themselves with chemistry and engineering at the same time. The names of chemical engineers and the role of chemical engineering in industrial organization

have been more and more demanding the world's attention.

WHAT IS INDUSTRIAL RESEARCH ?

While chemical engineering is a new force harnessed to the problem of production, another new phenomenon which has made its appearance in recent times as a most powerful ally in the creation of values consists in industrial research. The vital problem in this domain is essentially one of inventing and instituting the necessary "economies" so that goods may be delivered at the lowest price-level and with as little expenditure or waste of human energy as possible. Some actual specimens will make the subject quite intelligible.

THE MAKHOUNINE PROCESS

The Russian engineer, Ivan Makhounine, has for 2 years been employed by the French army to carry on investigations in the laboratories or the artillery located at Vincennes. The *Journee Industrielle* (January 14, 1925) announces that his researches bid fair to pass successfully out of the domain of *speculations scientifiques* to that of *operations commerciales*.

Makhounine's inventions have bearing on the problem of directly utilising heavy oils in the motors. The economic consequences of the process are considered to be enormous, almost revolutionary.

The entire politics of combustibles, coal, petroleum, lignite etc., are likely to be thoroughly overhauled. The results, momentous as they are, will be felt by the transportation system of the country comprising automobiles as well as railways, and river and sea craft. The Makhounine process is credited with the capacity for generating the electric current necessary to propel the vehicle on the vehicle itself.

A LIQUID REVOLUTIONIZING TRANSPORTATION

The invention is said to be in the form of a liquid. It can be produced by a simple apparatus operating on any oil and fat, nay, on the wastes and residues of these materials. And the liquid is stable for two months after which it resumes its original state.

The reporter says that the costs of erecting and maintaining the installations for the Makhounine liquid are very small. The existing motors can be utilized for some time and may gradually be replaced by more suitable motors which will still further reduce the total expenses of operation.

As soon as the news of this invention became known and its authenticity verified by independent government and military experts the industrial world in France was upset. For one thing, the electrification of railways on which French capitalists have been spending fortunes has received a tremendous shock. Some of the orders passed by certain railway companies are alleged to have been already cancelled.

SPECIMENS FROM ENGINEERING INDUSTRIES

This specimen of industrial research is cited as but an indication of the line along which applied economics has been operating in France. Not every investigation produces of course an epoch-making consequence. But one has only to remember that the urge of economic development is to-day consciously taking shape in the direction of instituting *Versuchsanstalten* (research-offices) and maintaining well trained investigators under the auspices of industrial associations, invariably joint and co-operative as they are. The *Neue Zurcher Zeitung* of Zurich, for instance, enumerates some of the research activities which have born fruit in Germany's workshops, technical laboratories and experimental stations during 1923.

These belong, however, exclusively to the field of technology or mechanics.

METHODS OF MANUFACTURE

The *Gesellschaft fuer Metallkunde* announces several new methods in manufacture. Iron, steel and the new "light metals" have been the subject of successful experiments in certain directions.

ENERGY-SAVING

As regards the generating and saving of energy some successful work has been done in regard to heat. But it is said the industries have not been able to exploit the inventions on as large a scale as they should. Coal, moreover, has been transformed into a liquid. But one is not sure as yet if this laboratory process constitutes a real improvement on the present method of utilising the coal-calories.

WATER-POWER

Larger water-power installations have been erected in the Bavarian Alps. The works of the Isar valley are intended for the huge chemical and other industries located in the north eastern regions of Bavaria,—bordering, as they do, on Austria. Time is not distant when the electrical installations of Western and Central Germany will form parts of the same system which generates the power in the Alpine and other Bavarian centres.

ENGINES

In the line of steam-engines German achievements are going ahead. The great engineer Schmidt had constructed boilers for a pressure of 60 atmospheres. In 1923 the 100 atmosphere limit has been surpassed. At higher pressure the possibility of realizing plenty of material advantages has been thrown open.

The engineers engaged in the manufacture of Diesel engines for ships have not failed to introduce certain

profitable novelties. Water-power machines e. g. the "Aquapulsor" such as owe their patent to the engineer Abraham have something extraordinary to relate. It will be possible with their help to exploit the lower water-falls as well as even the ebb and tide of rivers. The new wind-machines, the "Ventimotor", constructed during the year are considered to be not less important as mechanical inventions. As they require comparatively small wind-power their serviceableness in air-ships has been greatly heightened.

The wind and other motors are dependent on "irregular" factors, on the caprices of Nature, so to say. In order to militate against the wastes caused thereby new machines have been invented which assure a constant and uniform current.

SOLAR AND VOLCANIC MOTORS

Markuse has continued his investigations in the machines designed to exploit the solar energy. But they are not yet questions of "practical politics" from the business standpoint. Equally interesting, although, again, solely as "scientific" propositions for the time being, are the researches in the field of "Redamotors" and the allied machines which are adapted to the exploitation of subterranean heat. Germans have taken the hint from Italian investigations in volcanic depths to try experiments on their own volcanic regions. Both the solar and volcanic motors are at present perhaps mere industrial curios. But they may at any time begin to loom large on the horizon of economic development.

TRANSPORTATION

While electrification has been advancing steadily in the Prussian and Bavarian railways the research in auto-transport has not yielded any tangible results. All new processes happen to be economically unworkable.

The manipulation of heavy oils occupies the principal attention of the investigators. Under the auspices of the *Berliner Omnibus Gesellschaft* several experiments have been successfully carried out in the construction of an auto-engine which is likely to cost 60 per cent less than at present. It can be operated with charcoal and without giving rise to disagreeable odour.

WIRELESS

The mechanics of telephone and telegraph have several novelties to mention. The "automatic telephone" was opened in Bavaria and has since been extended to other parts. "Wireless" telephony commenced with the banks and big business houses and is at present used for ordinary conversations. The apparatus constructed by Vogt, Engl and Massolle has received further developments which in their turn are being laid under contribution by the "speaking film" and wireless telegraphy.

AGRICULTURAL TECHNOLOGY

The Germans have considered it expedient to import and employ the Ford tractors for their farms. But there is a strong movement among the manufacturers of machines directed towards the invention of certain apparatus that may successfully withstand and prevent this invasion. Artificial manures of all sorts have moreover been contributed by chemical research. Experiments are being made with the wastes of cities.

HOUSEHOLD MECHANICS

In the daily items of domestic life several new features are noticeable. Ordinary raw "brown coal" can now be used as fuel in the ovens which were supposed to be not adapted to this combustible. In addition are to be mentioned some of the new constructions which necessity has given rise to in the form of substitute-heaters,

bath-tub and other ovens. Engineers have taken upon themselves the problem of furnishing their homes with cheap installations.

HAPPINESS AND COMPETITION

Researches in the field of industrial chemistry have not been touched upon in the above list. The number of *Versuchsanstalten* or *Forschungsinstituten* for dyes, glass, sugar, coal, leather, porcelain, etc, provided as they are with rich museums, laboratories and miniature workshops is very large in Germany.¹

Industrial research has been achieving wonderful results in human inventiveness and brain-power. But these acquire a significance solely because they serve to make the life of the people, the teeming millions, less disagreeable and more happy.

And while a great social purpose is thus being served by engineering technology and chemistry, be it noted also that these achievements have a substantial value on the world-market. The inventions, furnished with "economics" as they are, enable the merchants to place the goods on the trade cheaper than before and than others who do not happen to be armed with the same. The capacity for competing with other nations rests thus ultimately in the quality, quantity and variety of scientific investigation applied to the problem of economic development, or in other words, industrial research.

1. In *Dix Ans d'efforts scientifiques et industriels* i.e., Ten years of Scientific and Industrial Enterprise (1914—1924), an encyclopaedic Work on French activities, that is in the course of publication under the General editorship of M. Daniel Berthelot (*Société de chimie industrielle*, Paris), the chapter on research comes from the pen of the chemist, Professor Moureu of *Collège de France*.

CHAPTER XLVI

A SCHEME OF ECONOMIC DEVELOPMENT FOR YOUNG INDIA

A. THE ECONOMIC CREED

POVERTY AS UNEMPLOYMENT

POVERTY in India today is not so much a resultant of iniquities in the "distribution" of wealth as of the dearth or want of creative occupations. It is more a universal phenomenon affecting, as it does, all the classes of the people than, as is the case in the more advanced countries of Eur-America, a bye-product of the exploitation of one class by another.

The Indian poverty problem is to be envisaged as, essentially speaking, a question of unemployment on a vast, continental scale. How to combat this huge unemployment or, in other words, to create myriads of employments, professions or careers and add to the stream of values is the problem of the poverty-doctor. This is the task that economic development seeks to solve.

INDUSTRIALISM THE CURE FOR POVERTY

Theoretically, the doctoring is quite simple. Let the economic activities of the people grow in multiplicity and naturally also in diversity i. e., let the production of wealth increase on all fronts and millions of men and women will begin automatically to function as industrial workers and hundreds of thousands as engineers, chemists, bank managers, insurance-agents, office-clerks and what not. The factories and workshops will be compelled in their own interest or through the people's and the government's pressure to open elementary as well as vocational schools for the training of apprentices, and research institutes as well as technical colleges for the supply of directors and experts.

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And of course agriculture will be relieved of the burden of maintaining teeming millions and adjust itself to the redistribution in population as well as pick up much of the science and technology afloat in the atmosphere. Simultaneously with the handicrafts commence shedding their "primitiveness" and rise to the level of subsidiary industries such as are adapted to the new age of large and medium production. In other words, industrialism is the cure for poverty, for it is nothing but industrialism that is presupposed by this great consummation.

Add to this, in order to mention the furthest logical consequences, that the villages will grow into municipal areas! The sanitary and cultural conditions of the people both in town and country will improve. Individuality, manhood, democracy, political self-consciousness and economic energism will be tasted not by tens and dozens but by thousands, hundreds of thousands and millions. The world will have to feel that there is such a thing as India.

THE STRATEGY OF THE NEXT STAGE

Industrialism, indeed, has its dangers and pitfalls. No stage in the history of economic evolution is without its evils. But it would be sheer thoughtless obstinacy to practise blindness to the miseries and evils of today and yesterday or even glorify and cling to them as virtues, in the fear lest the next stage ahead should bring in new and unheard of troubles.

There is a limit to cautiousness. One has to be reasonable in regard to the problems of tomorrow; and while not neglectful in the matter of safeguards such as, humanly speaking, may be foreseen both in technique and organization, the strategist or statesman has to plunge boldly into the immediate future. And this future will

take care of other futures. It is not expected of man to achieve impossible feats and to be forearmed against the eventualities of millenniums.

THE ROLE OF CAPITAL

Be this as it may, all this transformation implies chiefly one thing, namely, capital operating in terms of crores. And perhaps nowhere does the extreme monistic and metaphysical doctrine of labour being the sole source of value find a greater refutation than in the present problems of applied economics in India. For, in order to create occupations, employments, professions or careers, the foremost agent that Indians need today is the wealth mobile in hoarded forms. And that is a stuff which only the most successful among the industrial nations of the world happen to possess in large loanable quantities.

FOREIGN CAPITAL A GOD-SEND

The poverty-doctors of India have therefore but one grand mission before them. They have to approach the big bankers of the world and invite them to invest resources in Indian men and materials.

No matter for what reason, India has failed independently to develop a substantial capital power during a whole century,—the century that has established the industrial revolution on a firm footing in Great Britain, America, Germany and France and partly also in Japan, Italy and Russia. To-day the little industrialism that has come to stay in India is nearly 75 per cent perhaps to be accounted for by alien, mostly British capital.

Without these foreign sources of finance India would be poorer in material life as well as less efficient in intellectual and technical affairs. It has to be admitted that but for foreign capital, *other circumstances remaining the same*, her economic and spiritual poverty would be more

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palpable, extensive and profound. Foreign capital is not altogether a curse, pure and unalloyed.

NO UNMIXED BLESSING

It is industrialism that will save India and in this saving of India co-operation has to be sought from foreign capital. No unmixed blessing however, is foreign financial aid. The fundamental objections against it are political such as have been the problem of China, Turkey, Poland, Hungary, Austria, even Germany and other countries e.g. in South America to counteract each in its own way. But so far as India is concerned she has nothing new to lose in the political line. The economic advantages, on the other hand, are mostly solid gains.

But even economically, the price of foreign capital is immense. India has already paid much because of it during the last half-century. She will have to pay dearly again should she care to have more of it.

The natural resources of the country will tend to get exhausted. The dividends and profits on crores of foreign money will reach the foreigner's pockets. And the directing heads will naturally be mainly foreigners.

But still India can bargain with foreign finance and come to a more or less satisfactory arrangement for herself on the principle that half a loaf is better than no bread. Not only Great Britain and the United States but Germany, and even France and Japan may be invited to co-operate.

THE DEMANDS OF FOREIGN FINANCIERS

It is clear that foreign capital will demand "security" as a very first condition. This question has assumed serious proportions in other countries. But as long as India is part of the British Empire she enjoys international credit as the land of law and order in spite of nationalistic movements. The problem, therefore, is not

so complicated as, say, in the "unsettled" countries of Eastern, Balkan and Central Europe. India is one of the securest markets for investments. Indian patriots shall make it a point to advertise India abroad from this stand point.

Then there is the problem of certain minimum dividends and profits likely to be demanded by foreign finance. It is a purely economic consideration, and, as a rule, should be discussed without reference to any guarantee. The problem has to be fought out in every instance as a business proposition with the usual appraisals of normal risk and gain, profit and loss.

As a rule, foreign finance claims political or semi-Political concessions in "undeveloped lands". But Indians must make it clear at the outset that no privileges of a legal, political or social character are to be enjoyed in any form by the representatives of external capital. As a matter of fact, it should be considered a disgrace for citizens of British India as Juridical persons to have to concede special favours to anybody. The international prestige of the government should be their safeguard.

It is also understood that the contract will in each instance be made between Indian capitalists on the one side and foreign capitalists on the other, both groups functioning as private persons. Neither the government of India nor the foreign governments are to appear as contracting parties.

But the government of India will have the undoubted right, as every government has, to examine the "legal" basis of all contracts registered within its sovereign territorial jurisdiction. It is to be expected, besides, that everything that is in the least likely to be prejudicial to the economic development of India and Indian people

should be disallowed by the government while sanctioning the registration of the contracts.

HOW TO SAFEGUARD INDIAN INTERESTS

As for purely economic demands from the Indian side, these may be briefly enumerated as follows: (1) The undertaking should be incorporated in India, tell its capital in Rupees, and in every instance possess a certain proportion of capital belonging to Indians. (2) The directorate must contain Indian elements. (3) The higher branches of administration and technical direction must also contain Indian elements. (4) There must be an understanding to the effect that Indian experts get promoted to superior posts without having to feel an unnatural inferiority compared to the foreign personnel. (5) There must be provision for the training of Indian experts abroad and the workingmen and women at home. (6) The working men and women must have to be treated on terms as described subsequently in the section on industrial workers. (7) Every advertisement or propaganda material must be published in the journals owned and conducted by Indians in India or abroad.

How many of such demands are likely to be accepted at once and to what extent cannot be foreseen. It is a matter of higgling. But it is India's interest to have herself industrialized with foreign capital and she has to get it done by hook or by crook. One has to take note, besides, that today in 1925 the world conditions do not happen to be the same as they were, say, in 1875. An industrialized India is a power, and a power for the Indian millions,—on any count.

"PROFITS" AND THE MASSES

One of the severest impeachments of foreign finance is that worded by Sir Vithaldas Thackersay. "We cannot

but think", this great financier used to say, "that it would be to the permanent good of the country to allow petroleum to remain underground and gold to rest in the bowels of the earth until the gradual regeneration of the country enables her own industrialists to raise them and get the profits of the industries. The price paid is much too great for the advantage accruing from them to the country".

These statements, nationalistic and patriotic as they are, happen to be the words of a high authority who, however, was never considered to be a radical or extremist in politics. And yet it is time for Young India radical, moderate or otherwise, to reconsider this recalcitrant attitude on a statesmanlike and prudential basis. Idealists also must have to move about with eyes open.

Whether the Indian masses (and classes) can afford or should be advised to wait until our *swadeshi* millionaires have amassed huge fortunes by investing which they are likely to enrich themselves with the "profits of the industries" can hardly be decided, however, on purely rational grounds. The discussion is sure to be acute, very much divided, and at all events intensely coloured by "personal equation", not all of which is perhaps, honestly speaking, "patriotic".

INDIAN CAPITAL "UNDER TRAINING"

The economic creed that is being presented here considers foreign capital to be a god-send for the time being. It is but as a subsidiary ally and a second fiddle to it that Indian capital will learn to function and grow.

From the standpoint of national vanity the situation is not encouraging. But when the alternative is between the abject destitution of millions without any hope of redress and the sure possibility of an economic regeneration although under conditions of tutelage it is the better part of patriotism to choose the latter.

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It must be remembered that a people's life is to be counted not by decades but by generations. Besides, the entire future of the race is not being sold up, in any case, by the experiments of a decade or so.

B. THE PROGRAM OF ECONOMIC DEVELOPMENT EIGHT PROFESSIONAL GROUPS

If Indian poverty is to be successfully overpowered at all it can be done in the main with foreign capital. Young India should thus seem to be counselled to a doctrine of wholesale despair and pessimism. But, no, there is an extensive ground to be conquered by self-help itself.

The problem is for each individual to exert himself in his own sphere. One does not have to wait for an all-round patriotic propaganda in order to improve one's own lot in life. Many of the ways and means, although of the humbler grade, lie within our grasp. Some of them are already being tried here and there. It is but to be desired that the examples should be followed up in a more general manner, district by district.

There is no universal panacea which might be adopted indifferently by all classes. The doctoring of poverty must needs be precise, personal, individual in order that it may be effective. No prescriptions are likely to be worth anything that do not enable every individual, *each in his own way*, to contribute more to the national wealth and thereby acquire a title to a greater share of it.¹ A more or less equitable distribution is assumed in any case.

In the following program an attempt has been made to indicate the methods not in a "regional" manner but

1 If in this connection (the criticism of Parato's law and the examination of disharmonies in Pigou's *Economics of Welfare* London, 1924.)

profession by profession. It is assumed that the members of each professional group have identical and more or less similar problems to solve. More precisely, even in the same profession the struggle for existence and self-assertion is alike for members of like *incomes*. And, theoretically speaking, it may be postulated that the problem for each individual, no matter what be his profession, is to strive for the next higher flight of income. The process is naturally slow. But more ambitious schemes can remain but paper projects.

The population has been grouped into more or less arbitrary, eight professions. Although to a certain extent overlapping, the peasants, artisans, retail traders, industrial workers, landowners, exporters and importers, moneyed classes and intellectuals may be taken to make up the entire human strength of India.

I. PEASANTS

Our agriculture is overcrowded and demands relief. The average peasant possesses at present a holding of not more than 5 or 6 bighas. The area is too small to yield enough maintenance for a single family even at medeester standards.

1. LARGER HOLDINGS

(a) For the time being, an adequate enlargement of the holding is, economically speaking, more important for the peasants than education (elementary or agricultural) and "scientific" agriculture.

(b) It is assumed, moreover, that the tenure is fixed and secure.

N. B. *What is Village Reconstruction ?*

The measure needs legislation and backing by government.

As soon as the holdings are enlarged, (i) agriculture will be relieved of congestion, and (ii) landless labourers

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will be available for the industries. And rural reconstruction begins.

The "village" can be "reconstructed" only when it has disappeared or been "deserted." A paradox of social science. The reconstruction will be automatic as soon as a new economic order has set in and along with it a new legal system.

There is hardly any "politics," philanthropy or patriotism involved in the question of village-reconstruction. Raise India up to the next higher stage in economic evolution such as has taken place in Eur-America from, say 1775 or rather 1830 to 1875, and the villages will adapt themselves to the new modes of production and social utilities.

The question is essentially a technical one affecting, as it does, certain aspects of economic dynamics. Not "back to land" but "away from land" is to be the motto for, say, one generation.

There are too many cultivators. Their number can be reduced by diverting an estimable proportion of them to new professions.

2. NEW EMPLOYMENTS FOR PEASANTS

The "cottage industries" of the rural artisans should be able to absorb a part of the cultivators thus set free, other parts being exploited by the "new" industries (small, medium or large). It will be noticed that the *charkha* and *khaddar* have still a place in the social economy as some of the handicrafts,—as soon as peasants are diverted from agriculture and begin to function as artisans. But the handicrafts themselves have need to be reconstructed on productive and more "paying," modernized lines.

3. CO-OPERATIVE SOCIETIES

(i) The establishment of unions by and among peasants for sale, purchase, irrigation etc., on the co-operative-

principle is the only method by which they can advance their economic status. (ii) These unions may be made to grow in time into the basis of co-operative credit societies (agriculturists' banks).

N. B. Unionization is a purely voluntary affair. But it depends on a vast amount of propaganda work such as can be done properly (1) by agricultural experts trained in the schools or colleges of agriculture and (2) by graduates or other qualified persons with knowledge of economics (cf. the "county agents" in the U. S. A).

About 10 such propagandists are needed per district. Rs. 1,000 per month may be taken to be the budget for the propaganda bureaus. The work can commence with nationalists. Districts Boards are likely to come to help.

Agricultural co-operatives are no new things in India. The movement requires only to be carried further and deeper.

Co-operative credit societies cannot go very far in helping the peasants out of their difficulties. These must have to be supported at the top by "agricultural banks" established by the moneyed classes. The government also will have to open special banks for agriculture to finance the peasants through their co-operatives.

4. ORGANIZATION OF SALE

Although the question of sale has been attended to in the preceding section it deserves a special emphasis. The raw produce is at present let off under conditions very unfavourable to the agriculturists. Without producers' combines the market cannot be protected from the arbitrary dictates of purchasers, especially when the produce is intended for overseas export.

II. ARTISANS

The artisan class comprising, as it does, almost every handicraft or "cottage industry" comes, numerically

speaking, perhaps second only to the cultivators. It includes carpenters, smiths and metal workers of all denominations, potters, weavers, tanners and what not.

Economic advance would consist in an elevation to the stage that lies just above the one in which each craft finds itself at present. And that is fundamentally a technical question which cannot be grasped by a mere patriot nor by an ordinary economist. (It does not matter whether the artisans be literate or illiterate.)

1. IMPROVED APPLIANCES

Other circumstances remaining the same, perhaps what these artisans need the most is the introduction to a new technique, an improved method in production, the use of a new chemical or a new machine, tool or implement.

2. ARTISANS' SCHOOLS

The "cottage industries" can begin to imbibe or assimilate these new techniques provided there be in every district at suitable centres several institutions equipped with implements and chemicals of all sorts such as are available for exhibition and practical demonstration. These museums may function really as regular "handicrafts schools" with short-term or full industrial courses.

3. HANDICRAFTS OR COTTAGE INDUSTRIES BANKS

As soon as the artisans feel convinced that they have mastered a new process they will need money, hard cash, with which to buy the necessary outfit. It is just to finance these "improvements," in handicrafts that small banks have to be founded (by moneyed classes including landowners) at every important centre. These "artisans banks" will be called upon to make loans ranging, say, from Rs. 10 to 500 on the mortgage of the outfit

purchased by the artisans. A condition may be made to the effect that the outfit will have to be bought through the banks.

III. RETAIL TRADERS AND PETTY MERCHANTS

Our shopkeepers or retail traders constitute along with the artisans a very great bulk of the population.

1. SCHOOLS FOR RETAIL TRADERS

Many of our retail traders are, like the artisans, illiterate. But in this instance as in the other illiteracy should not be considered an absolute hindrance to economic elevation.

What is most needed by shopkeepers and petty merchants is probably an extension of the knowledge of markets, goods and prices. They can improve their earning power as soon as the horizon of their commercial geography is enlarged. And this is possible only when there are established commercial or economic courses by groups of villages or even in subdivisions of the districts.

2. SHOPKEEPERS' BANKS

Every new idea implies a demand for money for its realization. And the shopkeepers will need capital such as can be advanced by banks, specially established to cater to this demand. The guarantee for the loans will be furnished in each instance by the goods and other properties.

N. B. Handicrafts and Trades Schools.

(1) The absence of literacy is a fundamental handicap. But the best has yet to be made of a bad case, and efforts at economic advance must not be made to wait until primary education has been made compulsory, universal and free.

Besides, it has to be observed that the artisans' skill of hand or the shopkeeper's shrewd business sense are not

dependent on literacy. It is assumed, in the present consideration, that poverty is more dangerous than ignorance.

(2) The artisans' schools and schools for retail traders can be located together in one institution. They are to be run on lines similar to those of the *Fachschule* in Germany or *Ecole pratique de commerce et d'industrie* in France.

(a) The following subjects of instruction are to be provided for as compulsory features in every school: (1) drawing and designing, (2) machine practice, (3) raw materials, (4) chemical processes, (5) marketing. The special industrial and commercial subjects will depend on the locality. General culture subjects are not excluded.

(b) The full course will be complete in 3 years and will be open to such scholars as have reached the Matriculation standard. But facilities for part-time courses or special subjects will be offered to anybody and everybody, —of course under conditions of institutional discipline.

(c) The full course scholars are to be entitled to admission in the existing higher technical colleges or institutes. But in any case they will be competent hands in new industries, banks and other business establishments.

(d) One mechanical engineer, one chemist and one economist will constitute the minimum strength of the higher staff in such schools.

(e) About Rs. 25,000 per year is likely to be required for running an institution like this, with an average enrolment of, say, 250. At least 4 such schools are required per district, to begin with.

(f) The institutions are to be founded by the people. A year or two after the start the municipality or district board may be applied to for an annual grant-in-aid for recurring expenses. With a view to improvements

in building, workshop equipment, laboratory and library the provincial government is to be approached for periodical donations.

IV. INDUSTRIAL WORKERS

The industrial workers include not only the working-men and women employed in the Indian and English owned factories but also the employees in the collieries and other mines, railways, dockyards, river and sea craft as well as tea and coffee plantations.

Compared with Europe and America the number of industrial workers in India is small. But their problems are the same as elsewhere.

1. RIGHT TO STRIKE

The industrial workers can improve their economic standing only if they are in a position (i) to bargain with the employers in an organized manner and (ii) to exercise the right of strike on all serious occasions of difference.

2. DEMANDS

The list of their legitimate demands includes the following items : (i) insurance against accident, sickness and old age, (ii) improved housing and factory conditions, (iii) better treatment from managers, (iv) elastic wages schedule keeping pace with the prices, (v) profit-sharing, (vi) a hand in the control of the workshops, (vii) educational facilities, both general and technical.

N.B.—The eight-hour day has already been enforced by law.

3. UNIONS

In order that these ends may be won the working men and women have to be grouped in strong unions. And these unions will function not only as the nuclei of economic struggle and self-assertion but also as social and recreational centres.

4. CO-OPERATIVE STORES

The working men and women can make a saving and live relatively cheap if they start shops or stores on the co-operative basis.

N.B. The very fact of being employed in "modern" works, although not free from certain peculiar evils, acts as a great educative agency on the *morale*, brain and technical instincts of the employee. Industrial workers constitute therefore a great spiritual asset for India. The more they grow in number, variety and organization the quicker will be India's advance towards self-realization in world-affairs. Those intellectuals who will choose to serve the interests of this new class of the Indian population will rank among the greatest of patriots.

V. LANDOWNERS

Our landowners range from the poorer and middle-class property-holders through all higher grades up to petty princes. Economically speaking, therefore, they do not constitute a single group.

(a) The lower rungs of this profession may be regarded as almost similar to the cultivators, artisans, retail-dealers and petty merchants. The problem of their elevation in the economic system is virtually identical with that of the others described in the preceding sections.

(b) The position of the "landed aristocracy" (comparatively prosperous, medium and large proprietors as well as the petty princes) calls for a special treatment. Other circumstances remaining the same, it is advisable that these landowners should learn to function as fresh creators of value and thus to add to the national wealth as well as build up new fortunes for themselves.

The question is essentially one of social and moral reform. Although the "landed aristocracy" is not bulky in size, there is no gainsaying the fact that the existence

of a number of high-class idlers in every district is a hindrance to the people's economic uplift.

It might be observed that in certain instances the landowners supervise the management of their estates and to that extent are useful social servants. Even if that were really the case, the problem of employing their sons and relatives in creative occupations would have to be seriously attended to in the interest of the economic development of the country.

The sons and relatives of the prosperous property-holders should not live together in one and the same family but maintain separate house-holds and start independent careers. It is assumed, for the time being, that the laws of inheritance and partition remain as they are. While, therefore, not abandoning the share rightfully belonging to each, the kith and kin of the landed aristocracy as founders of independent families will have to be on the look out for occupations such as can afford a decent living even without the income from the paternal properties. In other words, they have to enter the economic arena as active agents in the struggle for existence.

1. FARMING

Among the occupations the most suitable is perhaps farming. One can take to cultivation with hired labour on plots of, say, 100 bighas or more, spend regular hours on the farm as manager and controller of the operations, and in every way see to it that agriculture becomes a profitable business. Initial capital may be drawn in doses from the legal share of the paternal wealth.

2. MODERN INDUSTRIES

In addition to the handicrafts or "cottage industries" run by the artisans the country needs "new" industries on all different scales. At the present stage of our

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economic development they are bound to be "small" in size. Small industries in India constitute but the "virtue of a necessity" and have no logical or necessary connection with an alleged Indianism in spiritual or material outlook.

3. FOREIGN TRADE

Another line is export and import business which may be started in the metropolitan or district and sub-divisional centres.

4. INSURANCE

A line which is likely to be very profitable but which has hardly yet been seriously tapped by Indians is life and allied insurance. The landowners' sons may start or serve as agents and directors of insurance offices.

5. BANKING

The sons of landowners may start banks in order to finance (1) co-operative credit societies, (ii) handicrafts or "cottage industries", and (iii) retail trade, such as have been indicated above. There is another class of credit institutions that may be established with their resources. There are (i) banks to finance foreign trade and (ii) banks to promote modern industries.

N. B. The landed aristocracy are not absolutely devoid of capital. They have but to acquire the virtues of hard and honest labour as normal human beings in order that they may discharge the functions of farmers, and responsible managers of banking and insurance institutions as well as export-import offices and industrial undertakings.

VI. EXPORTERS AND IMPORTERS

Foreign trade is a very weighty item in national wealth. Of late the line has begun to attract Indian talent and enterprise in an appreciable degree.

1. BANKS FOR FOREIGN TRADE

Many export or import houses fail to carry a transaction through simply because of the absence of credit facilities on the Indian side as well as at the foreign ends. There is an extensive field for the establishment of foreign-trade banks by Indians. Overseas trade can bring in large profits into Indian pockets only when there are Indian banks to finance exports and imports.

2. OVERSEAS INSURANCE

The problem of overseas insurance is equally important for exporters and importers. If there were Indian insurance offices, much of the foreign trade profits would be saved for the Indian merchants.

3. COMMERCIAL NEWS BUREAUS

Our exporters and importers suffer very often for want of even elementary knowledge regarding the industrial, shipping, exchange and market conditions. Modest as they are, they cannot afford to maintain an intelligence department. Several offices in more or less allied lines should therefore combine to establish foreign-trade associations such as might serve as commercial news bureaus and administer an information and news service to members as well as clients.

4. FOREIGN LANGUAGE AND COMMERCIAL GEOGRAPHY CLASSES

These foreign-trade associations may also function as or organize schools for commercial subjects with special reference to the foreign languages (French, German, Japanese etc), the industrial geography of the world, and the technique of export and import.

5. INDIAN AGENCIES ABROAD

Both as buyers and sellers Indian merchants can derive substantial concessions, economies and profits if

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they have their own representatives in foreign countries with which they have to deal. Like the commercial news bureaus at home commercial representatives or agencies should be established abroad by several export-import houses in union. A small agency of Indian staff can be maintained in foreign countries on Rupees 10,000 per year. It can become almost self-supporting in three years if skilfully managed.

VII. MONEYED CLASSES

The word "moneyed classes" is vague, comprehending as it does, everybody who possesses hard cash, whatever be the amount, available for saving. The group comprises "money-lenders", the landed aristocracy, as well as the intellectuals. The services of this group to the economic development of India are identical with those of the land-owners, excluding perhaps farming.

1. NEW INDUSTRIES

For the purposes of the present consideration the industries may be classified into four groups :

(a) *Handicrafts of cottage industries*: Independent artisans employing capital not exceeding Rs 500-1,000.

(b) MODERN INDUSTRIES

(i) Small industries: Capital not exceeding Rs 25,000.-1000,00.

(ii) Medium industries: Capital not exceeding Rs 500,000-Rs 2,5000,00.

(iii) Large or Giant industries: Capital exceeding Rs 2,500,000.

In regard to the handicrafts these are to be left to the artisans. The moneyed classes can, however, come to their help by establishing banks as has already been pointed out.

In regard to the other three groups of industries it is not yet a question of practical politics for the Indian moneyed classes, with few exceptions, to attempt financing the large or giant industries singly or in partnership with others. The highest conceivable today for Indian finance, and this also few and far between, is the group of medium industries.

The present program emphasises the fact that it is within the power of Indian moneyed classes to finance legion of new "modern" industries on a small scale. The industries are to be run as far as possible on personal proprietary basis. In any event there should not be more than two or three partners in an undertaking of Rs. 25,000 and in every instance the partners must all be full-time active agents as manager, expert, accountant or otherwise.

2. EXPORT AND IMPORT

It is on the same *personal and proprietary* basis that foreign-trade houses are to be established by the moneyed classes. A start is possible with capital not exceeding Rs. 10,000—25,000. There is an enormous scope for this kind of economic activity.

N.B. The problems of doing away with competition and of financial amalgamation with suitable houses in the same line may arise in course of time. But as long as possible one should work independently and try to achieve success on one's own unaided efforts. Only, as has been indicated above, commercial news bureaus should be established immediately by several houses united as foreign-trade associations.

3. INSURANCE SOCIETIES

Two kinds of insurance societies have been mentioned: (1) ordinary life and other insurances and (2) overseas or foreign-trade insurance.

Just at present European and American insurance companies have been deriving large profits from the men and women of India. Indian moneyed classes can save some of these profits for themselves, should they care to master the mysteries of this profession.

4. BANKING AND CREDIT INSTITUTIONS

Five categories of banks have been considered necessary in the present scheme of economic development : (1) Co-operative credit societies, (2) handicrafts banks, (3) shopkeepers' banks, (4) modern industries banks and (5) foreign-trade banks.

Of these, the co-operative credit societies form a class by themselves, depending as they do, on the mutual self-help of the peasants concerned. The moneyed classes can render financial aid to these institutions by establishing proprietary (or joint stock) banks for agriculturists, as has been suggested in connection with the landowners.

But it is the other four categories of banks to which the present program of economic development seeks to attract the attention of the moneyed classes. It is through these institutions that in the course of one generation " Indian capital " will develop into a " great power ".

Handicrafts and shopkeepers' banks may be started with an " authorized " capital of Rs. 50,000. Dozens of such institutions ought to be operating in every district (headquarters and sub-divisions).

As for modern industries banks and foreign-trade banks the initial " authorized " capital need not exceed Rs. 500,000. A bank is being advertized in the newspapers as established with a " subscribed " capital of less than 2 lakhs of which something like Rs. 75,000 has been " paid-up ". Metropolitan cities should be able to run scores of such banking institutions.

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N. B. All these categories are different from one another, each with its own risks and responsibilities. No bank should, as a rule, try more than one line of business, to begin with.

5. LEGISLATION AGAINST USURY

Unreasonable conditions in regard to loans and exorbitant rates of interest have to be penalized and in other ways counteracted by government legislation.

VIII. INTELLECTUALS

The group "intellectuals" constitutes neither a social nor an economic unit. It is neither co-extensive with the so-called *bhadralok* ("gentlemen!") class nor can it be regarded as the "middle" class as usually understood in Eur-America. No matter what be the origin, as soon as an individual has attained to a certain academic standing he belongs to the *intelligentsia*. The income of such a man may be as low as the monthly salary of Rs. 15 to Rs. 20 and reach even the highest Eur-American levels as in the case of successful medical men or lawyers.

1. NEW PROFESSIONS

The problem of economic uplift for the intellectual classes, especially such as are neither landed nor moneyed, is part of the larger question of the creation of new employments or professions in the country. These openings can be created only with fluid capital.

The interests of the peasants and industrial workers thus happen to be identical with those of intellectuals. One of the foundations of the present economic creed consists in the fact that agriculture is already over-crowded and must have to be relieved.

Unless the moneyed classes are in a position to start industries, establish banks, run insurance companies and administer foreign-trade houses it is not at all conceivable

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that intellectuals will get fresh occupations whether as clerks, managers or technical experts. And since the amount of capital available in India at present or in the near future is rather small and in any case can operate but modest industrial and commercial undertakings, the import of external capital should be regarded both by manual and brain workers as a most vital problem in the interest of India's material progress.

2. EXISTING SERVICES

Public criticism must have to be keen on the following points.

(1) Employees (intellectual as well as manual workers including teachers) in the existing services (whether in government or other offices and institutions) have the right to a raise in salaries and wages corresponding to the increment in prices.

(ii) The admittance of Indians (a) to the higher rungs of the administrative system as well as (b) to the technical services must be made less and less difficult.

N. B. Indian patriots should make it a point to enter the services especially in their higher rungs in as large numbers as possible. "Indianization" would bring in not only democracy but economic amelioration as well.

3. CO-OPERATIVE STORES AND HOUSING SOCIETIES

As with industrial workers it will be advisable for the intellectuals also to organize stores on the co-operative principle. Co-operative societies with the object of providing houses may also be tried. Cheaper living thus secured will mean a saving.

4. HANDICRAFTS AND TRADES SCHOOLS

At the matriculation stage the young men of the "intellectual" classes should be advised to seek the handicrafts and trades schools described in connection with the

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artisans and shopkeepers. Not everybody need qualify for the university. The new industries, banks, export-import houses etc., will be in a position to absorb the scholars who come out of these schools.

5. PIONEERS OF ECONOMIC DEVELOPMENT

Just at present India does not possess more than a very limited number of such first-class intellectuals as can undertake in a responsible and technical capacity the economic development of the country. But a band of such men who may be described as something like an "economic general staff" is an absolute necessity for each and every district.

There are hardly any opportunities in India for the training of these pioneers. They must have to be sent to Europe, America and Japan for equipment.

For the next ten years each and every district has to finance the training of, say, 100 pioneers at the rate of 10 per year. They are to qualify themselves as (1) industrial chemists (as well as agriculturists) (2) engineers (mechanical, electrical, chemical and sanitary) and (3) economists (with special references to banking, insurance, exchange and foreign trade.)

None but persons possessing qualifications corresponding to the M.SC., M.B., B.E., B.L., B.T., or M.A., should be deemed fit for the scholarship. They are to be between the ages of 25 and 28 and spend three or four years abroad for travel, investigation and research. There is to be no compulsion in regard to studying for a degree.

The scholars will try to associate themselves with banks, business houses, clinics, hospitals, sanatoriums, industrial research institutes, factories, farms, as well as technical and commercial colleges in a more or less private manner as, assistants or guests of the directors. The results of their investigations will have to be published from time to time

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in the scientific and technical journals of the countries in, which they are placed and occasionally also in India. Attending lectures by specialists or taking particular courses in certain fields will likewise belong to the regular work of the scholars abroad.

Average expenses : Rs 10,000 per head for the entire period.

QUESTIONS OF ECONOMIC POLICY

There are four items of economic life which both in themselves as well as in their general bearings on the country's agriculture, manufacture and commerce affect the employment or unemployment question of the Indian people in a tremendous manner. These are (1) tariff, (2) currency, (3) railway and (4) shipping. In an all-round program of economic development for India one must have to take these factors into consideration.

But, for the present, each one of these problems is a controversial political issue and is inextricably mixed up with the government's "imperialistic" economic policy. Until the administration is more democratized, i.e., Indianized, virtually nothing can be accomplished in these directions. It remains for nationalist agitation to win ground in each of these fields inch by inch, or mile by mile, as the case may be.

It is not intended to set forth a philosophically comprehensive or theoretically perfect scheme complete in all its details. Hence the larger "economic policy" is left out of consideration. Only such measures as can be undertaken by the different classes of the people themselves almost immediately, with or without much government support, have therefore found a place in this economic program for *Young India*.

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